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THE FORUM OF EDUCATION

A Journal of Enquiry and Research in the
Psychology, Philosophy, and Method
of Education.

Index to Vol. VIII, 1930.



ISSUED BY THE TRAINING COLLEGE ASSOCIATION

THE FORUM OF EDUCATION.

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THE FORUM OF EDUCATION.

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The Forum of Education.

VOL. VIII. No. I.

February, 1930.

The Biological Interests of Young Children.

PART II.

BY SUSAN ISAACS.

The following material completes the extracts from the records of the biological experiences of a group of young children. The diary can hardly, however, be evaluated without reference to the introductory remarks and the description of general conditions given in the last issue of THE FORUM.*

DIARY.

B.—INTEREST IN ANIMALS—*continued.*

Autumn Term, 1925

Children quoted, and ages in October, 1925 : Frank (6.0), Tommy (3.8), Dan (4.5), Priscilla (6.2), Dexter (4.4), Christopher (5.1), Alfred (3.10), Herbert (2.7), Phineas (2.8), Jessica (3.0), Penelope (4.1).

23.10. Pr. and Dan found a small snail in the garden, and noticed the spiral shape of the shell. We drew it on the blackboard, and modelled it, the children then drawing it on paper. Then I drew a spiral on the floor for them to walk on, and they ran along the line, going inwards and then outwards, for about half an hour. *Active interest.*

24.11. I took a cocoanut to school, to hang up for the tits. The children handled it, talked about it, shook it, and could hear what they called the "water" inside it. They made a hole in it with a hammer and a nail, poured the contents out into cups, and drank it. They then tried to saw it open, but got impatient with the slowness of this method, and took a chopper and chopped it open. On my suggestion, they put a string in the hole in each half, and hung them up in the trees. In looking at the cocoanut, F. had spoken of its "eyes," and this led Dan to ask, "Is it alive?" *Active interest.*

25.11. I took a large glass bowl to the children, in which to make a wormery. They dug and brought in bucketfuls of soil, and a number of worms they found, putting decaying leaves on the top. (All this was my suggestion, but had arisen from the children's talk about the worms they found when digging to put bulbs in.) In digging for the worms to-day they turned up the

*Further material will be given, and the theory of the method used will be more fully discussed in my forthcoming book on "Intellectual Growth in Young Children."

THE BIOLOGICAL INTERESTS OF YOUNG CHILDREN

place where we had buried the dead rabbit in the summer. The children talked of the rabbit, and tried to find it. F. said, "It will have gone to heaven now." We could not find it, perhaps because the dog had been digging there some days earlier. I suggested this reason to the children.

Active interest. Death.

30.11. To-day, F. and Pr. looked at the wormery, and noticed that some of the leaves had been pulled down into the soil.

Active interest.

4.12. The children watched the tits on the cocoanut, through the window, with great delight.

Active interest.

Spring Term, 1926.

26.1. I found that Dan and Pr. had cut a worm into pieces with a saw. They spoke of the blood and "inside."

Cruelty.

18.2. T. played with the cats, and gave them "buns" to eat.

Fantasy and identification.

11.3. T. had brought to school a stuffed dog, which he called "Teddy." On the way he stopped to show it to a real dog; and in the garden, took it to show it to the real dog-Teddy, saying, "It's your friend."

Fantasy and identification.

23.3. Dan pretended to be a "crocodile," pulling his mouth out at the side with his fingers—a long ritualized play. Ch. and Pr. made a bed for the crocodile, and kept him in their house. Later I was "the keeper," and they bought him from me, but he would not stay with them as they did not give him enough to eat, nor food of the right kind, nor any water, and so on. Each time they went out for a walk he ran away and came back to his keeper, making a loud noise with his mouth as if he were hungry. He kept this play up, refusing to speak or behave as other than a crocodile, for a long time. At cocoa time, the crocodile was given cocoa to drink.

Fantasy and identification.

29.3. T. watched a large spider which was in the wormery, and then took it outside on the end of a stick. The children all examined it. At first they wanted to hurt it, but I would not allow this. They then watched it as it crawled all over my arms. They asked, "Does it hurt?" I said, "No, it tickles." Then they asked, "Would you let it crawl on your face?" I said, "Oh, yes." Presently their timidity disappeared, and T. and Pr. let it crawl on their hands. They then looked at it through the lens. When I put it back into the wormery, T. took it up again on his hand.

Cruelty. Active interest.

Summer Term, 1926.

14.4. Pr. was talking of "baby bees," and how they came. She asked, "Do they lay eggs and how do they get out of the eggs? Have they got a beak to break it with?"

Active interest. Reasoning.

17.5. While sewing in the afternoon, Pr. told us that she had "seen a bull" while on the way to school. Dan said, "A bull? what's a bull?" Pr. said, "A he-cow." Dan: "But isn't a cow a he?" Pr. and I said, "No." We spoke of he and she animals, and I gave them the terms "male" and "female." We instanced the males and females among the children in school, the mummies and daddies and other grown-ups we knew. Then Dan said, "What do you call it when there's a he-and-a-her, a she-and-a-him, together?" I was not quite sure what he referred to, but said, "Do you mean when they are together in the same room?" He said, "When they are touching." I touched his hand, and said, "Do you mean like this?—we haven't one word to refer to this—we say, 'He and she are touching.'" He said, with a shy look, and hesitation, "No, I mean when they are very close together, standing up." The conversation was broken off at this point by the arrival of a visitor.

Active interest.

3.6. Ch., Dan, Pr., and Dex. spent nearly an hour looking at the bones of the human skeleton, putting them together, comparing them with their own bodies, and looking at the book of diagrams. Dan said several times, "I'll show you—I know better than you—I do it every night with my daddy." He put his feet in the position of the two halves of the diagram of the leg, one pointing backwards and one forwards. The children said of one diagram, "It's a man with his skin off." Dan said, "Oh, I *would* like to see a man with his skin off, alive, walking about, and then I could watch what happened and see the blood." They noted the veins in each other's temple and wrists, and looked at the diagrams of the muscles, blood-vessels, organs, etc.

Active interest.

4.6. We now had some silkworms hatching out, and Pr. brought some mulberry leaves for them, offering to do so every day. She tends the silkworm she brought for Dan, and also a large woolly caterpillar she had brought to school, looking at it every day and giving it fresh leaves. *Tenderness.*

9.6. A. and Her. spent a long time watching the mice, and making them run up and downstairs in their boxes. When they were not successful in this they called them "naughty mice," saying to me, "Aren't they naughty mice?" When I said, "Are they?" they replied, "They won't do what we want, so *aren't* they naughty?" *Fantasy and identification.*

10.6. A., Her., and Ph. watched the rabbits, and fed them with green stuff. When the cabbage leaves were finished, A. asked, "What kind of leaves are those?" and when I told him, he walked about the garden looking for more leaves like them. *Active interest and tenderness.*

14.6. During the week-end, the cat had knocked over a cage of mice, and the "daddy mouse" was dead. The children looked at it, and spoke of its teeth, tail, and fur. I then said, "should we look inside it?" They agreed eagerly, and I dissected it in a bath of formalin. Dan, J., Ch., and Pr. watched with eager and sustained interest. They shuddered when the knife cut into the skin, but comforted themselves with the thought that it was dead. They saw the guts, kidneys, liver, heart, ribs, back-bone, airpipe, foodpipe, and stomach, brain, inside of eye, inside of mouth, and tongue. Ch. asked to see "the thinking part." They asked me to cut open the gut, to show the faeces. Later, they spent some time watching the silkworms and caterpillars, and feeding the rabbit. *Death. Active interest.*

17.6. When passing a fish-shop yesterday the children had noticed the crabs and lobsters, and I had said to them, "Shall I get one so that we can look inside?" They had said eagerly, "Yes." This morning I took along three crabs and some dissecting instruments. They examined the crabs, talked about the various parts, found the mouth and eyes, counted the number of legs, and noticed that in some cases the legs were short of one or two joints. They lifted up the tail piece, and noticed the difference between male and female. They put their fingers into the claws, and had me try to pinch them with the claws. They then began to open up the crabs, using the knives and forceps without any help from me, except in the case of Dan, whose crab seemed to require more pressure. They continued with this for half an hour or so, objecting a little to the smell of the crabs. They found the flesh of the crab inside, called it "meat," and apparently presumed that it was what the crab had eaten, not part of the crab. Dan found a small triangular piece of flesh, called it "fish," and said, "It's what the crab had for his dinner." In the afternoon, they put the pieces of crab into the jars of formalin I had provided, and spent a long time examining the parts again. I asked Dan if he had found a backbone in the crab, and he replied "No," with some surprise and interest. The children had found a small toad in the garden, and they spent a long time watching it, holding it, and making it walk. The younger children were particularly interested in it, J. and A. spending a long time with it. *Active interest.*

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18.6. To-day the children found that the toad was dead, and J. asked me to wash it and put it in formalin. I asked the older children if they would like to look inside it later, and they agreed.

Death and active interest.

Pr. said to-day that she "wanted to go on with her crab," and she and Dan and Ch. took out their crabs and dissected them further. Presently Dan said, "I've found the backbone," and showed me the inner side of the ventral shell, which does look rather like the sacral portion of the human backbone. We looked at it again, and saw that it was the inner side of the shell. The children took several of the legs off, and pulled the various joints apart. They got most of the flesh out of the inside, again calling it "meat." They then dramatized the dissection, saying it was "a man" whose inside they were looking at. They said, "We're putting him to sleep," giving him a little knock with the lid of the jar. "Now we're going to do something to him," and then presently they "woke him up." They also showed me one of the cartilages, calling it a "bone." *Active interest. Fantasy and identification.*

21.6. Pr. noticed that the toad had been opened and pinned out—Dan and Ch. had done it on the Sunday, with Dan's father. The two boys did not seem to want to go on with it, but Pr. was very interested, and said she would like to do it with me. Dan then came and showed her the insect they had found in the toad's guts, and which they had inferred was "its dinner." Pr. and I then cut open the gut further, and saw the faeces. Pr. opened the mouth, and she examined the tongue and the back of the throat. The children had earlier discovered that the cockchafer which we had found yesterday now seemed to be dead, and Pr. wanted to "look inside" it. When, however, we came to examine it further, we found that it still moved, and the children said, "It isn't dead," therefore. *Death and active interest.*

25.6. The children found a young robin standing in the path, Pr. recognizing it. It was fully fledged and able to fly, but not very strong. The children then spread some crumbs down, hoping that the robin would come back to them. Afterwards they all became "robin birds," and hopped and flew, asking me to catch them. *Active interest, fantasy and identification.*

29.6. A new lot of mice arrived this morning, and the children helped me to sort them out into male and female, putting one of each into each box, and feeding them. *Active interest and tenderness.*

1.7. The children played a family game of new-born babies. *Fantasy.*

Pr. asked, "Where are babies born—how do they come out?" Dan at once replied, "They come out of the vulva—here!" with the appropriate demonstrative gesture. Pr. was clearly shy about it—J. and Ch. were listening attentively, but said nothing. We had some difficulty in cleaning the cage of one of the female mice, as she bites in her terror. I put on gloves to hold her, and the children stood by and talked about this. We spoke of how she was "going to have some babies," and that we would leave her in a quiet place by herself. *Active interest.*

2.7. Ch. and Dan were cycling round the garden, and stopped by the potato patch, which I was weeding, to talk to me. They found a piece of "cuckoo spit," and began to look at it closely. Together we found the aphid in the middle of it, and the children then looked for more "spit," and found the insect each time. They asked where the "spit" came from. Then they found another beetle, and I suggested finding as many different sorts as we could. They entered eagerly into this, and found several sorts of flies, beetles, and aphides, which we then tried to name from a book.

8.7. When feeding and cleaning the mice to-day, the children noted that one or two of the females had grown very fat, and could hardly get through their holes into the open part of the cage. They spoke of this, and the elder ones said, "Perhaps they're going to have some babies." I took the males

away from these females, and put them into separate boxes. One female mouse which had been alone seemed to be frightened when a male was put with her, squealing and trying to get out of the cage. The children watched this, and asked why. *Active interest.*

After school, Dan said to his mother, "You're going to have another baby." She replied, "Am I? I didn't know I was!" "Yes, your tummy is fat, and when ladies have fat tummies, it means that they are going to have a baby." *Fantasy. Reasoning.*

9.7. We found this morning two families of mice born, eight or ten in each lot. The children watched these, and handled them a little. They saw that the eyes were not open, and the skin was hairless. Ch. said, "They look like little pigs." Later in the morning they saw the babies "hanging on to the mother," and asked why. When I returned the question, Pr. said, "They're probably drinking milk." *Active interest.*

20.7. Having far too many mice now, I chloroformed a family of young ones. When they were dead, I showed them to the elder children, and asked whether they wanted to "look inside." Ch., Dan., and Pr. dissected one each. They all began by cutting the nose off. Pr. again had some qualms at the beginning, and wanted to be assured that they were "not hurting them." She also said, "You wouldn't do this to *us*, would you?" While dissecting, Pr. and Dan carried on a play of "mother" and "doctor," with the dead mice as children. They pretended to telephone to each other about it, saying, "Your child is better now," and so on. Pr. telephoned to Dan, "Your child is cut in two." Dan replied, "Well, the best thing to do would be to put the two halves together again." There were many inquiries and answers as to whether it was "better," and that it would "be better again soon," and so on. Presently Dan said, "Now I'm going to put some water on it, and make it come alive again." Pr. joined in this. It was clear that for Dan this was pure play and fantasy—not a belief that it *would* come alive again. Pr. gave me a dead mouse to hold, and said, "Now it is alive again," and pretended to make it walk. I said, "Is it?" "Well, we are only pretending." All three showed a little excitement about the cutting, but it soon passed, and a period of observation, mixed up with this humanized dramatic play, followed. Ch., however, did not join in this fantasy, but kept on steadily dissecting and talking about it. There was much free and sensible talk among them all. Presently Dan and Ch. left us, but Pr. wanted to go and do more with me. Together we dissected more carefully the mother mouse. She saw all the larger organs, and we straightened out the gut so as to see the full length of it. She asked whether we had a long gut like that, and I told her ours was about ten yards long, or more. She then asked, "Have we got everything the mouse has?" I said, "Yes, except the tail!" which amused her. (Her mother reported that on going home to-day, Pr. said to her, "Do you know, mummie, when I was inside you, besides me there was about ten yards of gut folded up together, inside you!") *Death, tenderness, fantasy, and identification. Active interest.*

22.7. The children found to-day that if they took the baby mice out of the inner box in the cage, the mother carried them all back in her mouth. They noticed how quickly the mice were growing. In the afternoon, Ch., Dan, and Pe. dissected snails with me. We were able to cut the shell off completely, so that they saw the flesh coiled up as it had been inside the shell. They saw the stomach and mouth of the snail, and noticed the green mashed-up food in the stomach. Dan said, "What do they eat?" and presently Ch. remembered that he had seen them "eating plants." *Active interest.*

Autumn Term, 1926.

Children quoted, in addition to those already mentioned, and age in October, 1926 : Lena (3.10), Conrad (5.9), Jane (10.6), James (4.7)

6.10. Pr. found a dead moth in a box in which several caterpillars had been put in July, and tried to " set " it on cork. She found its chrysalis case and loose hairs which had come off the cocoon. She and Ch. felt how strong the silk was, and spoke of its keeping the chrysalis warm.

12.10. We had cleared out the glass jar which had been the wormery, and filling it with water a day or two ago we put in some water-snails and weeds. To-day some of the children (J., L., and Ph.) asked why the snails were in the water—evidently thinking them the same as the more familiar garden snails. *Active interest.*

25.10. The older children often carry the rabbits about as " babies," in their family plays, making temporary hutches for them in their " houses," and so on. *Fantasy and identification.*

26.10. Rabbits as " babies " again, carried about wrapped up in shawls, and put on see-saw. *Fantasy and identification.*

28.10. T. made a present of some of the rabbits' fæces to a lady visitor in the school.

31.10. Dan telephoned early in the morning to tell me that one of the rabbits was dead. He asked me if I knew what it had died of. I said I did not. I said, " Have you fed it every day ? " and he replied, " Not every day : we forgot sometimes." He then said, " We want to cut it up," and I said " All right, shall I come over later ? " I went over to tea, and the children at once said eagerly, " Let's cut the rabbit up." They went outside, brought it in in a sack, and we took it upstairs to the laboratory. We put it on the table under the light, and Jane, Dan, and C. waited. I did not initiate anything, and they sat there quietly for a few moments, then C. and Dan said, " What are we waiting for ? Do let's begin." I then said, " What *are* you waiting for ? What are we going to do ? " Dan then asked me if I would divide the rabbit, showing me the portions which he wanted to have, and which I was to give to the other two. I agreed to do this, but as soon as we began to cut into the fur they saw how difficult it was to get into this. I suggested that we should take the skin off first. They agreed that it would be useful, watching with great eagerness, making remarks on the fur, the colour of the inside of the skin : noticing, for example, that the inside of the skin was coloured the same as the fur, with black and white patches, etc. They also at once remarked on the fact that there was an inner skin which remained when the fur skin had been taken off. Jane noticed the veins on the inner skin and the silvery tendons visible in the forearm and wrist. Jane and C. were moved emotionally by this their first experience of " looking inside " ; they expressed some disgust and excitement ; whereas Dan showed only a steady intellectual interest. Presently Dan joined in the skinning, helping to take some of the skin off the head and the forearms, while C. tried to cut off the tail. They were amused at the fur remaining on the four paws, and referred to them as " gloves " and " Russian boots." Dan said once or twice, " You wouldn't do that if it was alive, would you ? Poor Pamela ! (the name they have given to this rabbit), you are sure it doesn't hurt her ? " at which Jane laughed, and said, " Of course not, she is dead." When the skin was off, I said, " Shall I cut up the front so that we can see the inside ? " They said, " Yes, do," and I did so, laying bare the organs of the abdomen, and presently by cutting through the breast-bone to those of the thorax they saw the food pipe at once and spoke of it, and presently the stomach, the kidneys, the heart, the lungs, the liver, etc. They asked me to

get out the eyes. Dan had an eye and the heart in his dish to examine, and the others had other parts. They then said, "Let's cut up the stomach." When we got it open we found it was full of undigested food, and Jane said at once, "Then it could not have died of starvation, as it has food in its stomach." We cut open the food-pipe at various places: they noticed that in one part it was very wide, and in the lower end near the anus it was very narrow. They remarked how in this lower end the fæces was already formed into the small balls in which it passed out into the anus: they noticed this, and Dan said, "Could she pass water?" Jane said, "Of course not, because she is dead: she could when she was alive," and then added, "She passed fæces; she always did four at a time." I noticed that they always referred to the rabbit as "she," and I said to them, "How did you know that it was she?" Dan said, "It was—Noel said so." I said, "I wonder how he knew? I wonder whether he had looked and seen the vulva." The children said, "Can we see it?" This was after the rabbit was skinned, and it was very difficult to decide what sex it was. I said that I could not tell which it was, but it seemed to me to look rather more like a male than a female. Dan's first response to this question had been an indignant assertion of Noel's opinion, but he at once accepted the reference to the facts. Presently the children noticed the bones, touched them, the backbone, the leg bones, shoulder and head. This led them to say, "Let's look at the skeleton" (that is, the human skeleton). It was not in the room, and they rushed out to look for it, Dan saying he knew where it was. They found, however, that it was not in its usual place, all the bedrooms having been moved about owing to decorations. They hunted for it for some time, and rushed with tremendous eagerness downstairs, saying, "Oh, we must find the bones. We *must* find them." They enlisted the service of all the adults till it was found, and brought it back in triumph. Jane and C. had not seen it before; Dan showed them how it fitted together, and C. said, "I know, let's make the skull and cross-bones," and they arranged the skull and two leg bones in this form. They then turned to the diagram book of the human organs, and spent a long time looking at these, tracing out the various organs, and making comparisons between the rabbit and the human being. The whole of this work was sustained with great zest and uninterrupted attention for over one hour and a half. Dan, however, then said, "I am tired of this. Let's go down." Jane, however, continued her work, being particularly interested in the human organs, and more particularly perhaps the bladder. We agreed that we would do some more with the rabbit to-morrow as it was now time to leave.

Death, active interest, reasoning, and tenderness.

1.11. Dan told L. as soon as she arrived about the death of the rabbit. Dan and Jane told me that Pat, the companion to the one which had died, was now much better. I asked, "Is he fatter?" as he had been extremely thin. "Yes." I said, "I wonder what had made the difference?" They said, "Perhaps Pamela (the other rabbit) ate all the food and he got none." They showed me how much turnip he had eaten in the morning. They fed the other rabbits and helped to clean them out. Later we put away into jars of formalin the parts of the rabbit dissected yesterday. When doing this they noticed for the first time the gall bladder tucked away inside the liver, and asked "What is that?" I gave them the name "gall bladder," and they said, "Let's cut it open and see what's inside." Jane said, "Oh, it's water!" as the watery-looking fluid ran out. *Reasoning, tenderness, active interest.*

9.11. Dan and C. dictated a letter to a grown-up to-day, to the Zoo, asking "the people at the Zoo to let them have any dead animals they had, in order to cut them up." *Active interest.*

10.11. Jane and Dan showed Miss Z. the bones of the human skeleton, naming head, hip, backbone, hand and foot. Dan asked Jane how to

distinguish between hand and foot ; Jane replied that the ankle bones would be heavier than the wrist, and Dan agreed that they would have to be. They then showed Miss Z. the dissected rabbit, and talked of the various parts. Miss Z. asked whether it was a " he " or " she." Jane said, " We thought a ' she ' until we cut it up, then we found it to be a ' he.' " Dan : " It hadn't a vulva. A ' he ' doesn't have a vulva, does it, Miss Z. ? "

Active interest.

12.II. After dark, a bat flew into the schoolroom ; the children were eagerly interested, and kept very still so that it would settle. It finally settled on a beam, and looked about ; they saw its face, but not very distinctly. C. wondered if it would get into the light, get on fire, and set the school on fire.

Active interest.

14.II. Dan asked to-day whether there had been any reply from the Zoo, and as there had not yet been, whether they should write again. (A reply was received later, to the effect that the Zoo usually cut up its own dead animals, but that if they ever had any to spare, they would send us some.)

Active interest.

15.II. Dan said several times during the morning that he wanted to look again at the parts of the rabbit, and we went upstairs for that purpose. Dan and Jane and C. looked at the diagrams of human organs first, noticing their position, placing the food-pipe, and so on. They noticed the diagram showing the layers of the skull opening to show the brain, and I then said, " Shall we look inside the skull of the rabbit ? " and they assented eagerly. We cut it open with scissors, and they looked at the brain inside. We then looked at the inside of the body cavity, noticing the lungs and the air pipes dividing into two to enter the lungs. We cut the air-pipe across, and Dan poked the scissors down into the opening. Jane then asked to look at the tongue, and we cut that out. Then they themselves cut open the kidneys and looked inside. Jane was surprised at what she saw ; she had expected to find food in the kidneys. They then traced the backbone both on the outer and inner sides. Later on, on my suggestion, we boiled the bones of the rabbit to get the flesh off. The children asked several times, " Is it done yet ? " and were surprised to find how long it took to get the flesh soft enough. The rest of the rabbit having begun to smell rather strongly, I suggested that we should burn it, and we burnt up the skin. The children said it smelt " like burning hair." Later they interested themselves again in the human skeleton. Dan calls the socket for the thigh-bone " the twist-hole." Dan said as he was holding the backbone, " It can't have been a man or a woman—it must have been a boy or girl, because it isn't long enough for a man or a woman." I suggested he should measure it against my backbone, and he did so, placing the whole thing in position. They decided that it was too short for anyone my height. Dan then measured it against Jane's back, but agreed that it was much too long for her. Jane then said, " It was probably someone about fourteen to fifteen years of age." Two visitors arrived then, and the children showed them what they had been doing, going through the whole argument again with them. One of the visitors said, " Perhaps when the person was alive there was something between the bones." Jane said, " Oh, yes, the muscles." Jane then handled the skull. She decided that it was not bone that the teeth were fixed into, but something else. She resisted my suggestion that it was bone, saying that it " looked like something else " to her. She noticed the spongy texture of the bones of the skull, and remarked that some of the teeth were decayed and some not present. She returned to examine the folding diagram of the human organs several times during the morning, and presently came to ask me where the appendix was. We found it in the diagram.

Active interest and reasoning.

19.11. To-day the children dissected further the rabbit which had been boiled for some hours yesterday. They took the flesh off as far as possible, but decided that it would be better to boil it still longer. Jane asked, when she began to dissect the foreleg, whether there were two bones or one, and answered the question herself by the dissection. During this dissection they spoke of it being "the rabbits' hospital," Jane joining in this quite as much as the younger children. *Active interest, fantasy, and identification.*

22.11. Miss X. had brought to school one of her own mice which had developed a large swelling, and died. The children were very eager to cut it up and see what was inside the swelling. They suggested that I should do the actual cutting up, as there was only one mouse, and seven or eight children wanted to see it—and some of them had scratches on their hands. The mouse had been dead two days, but had been kept in formalin. The children sat round and watched me open it up. The elder children's interest was concentrated on the tumour. We found that it was a skin tumour, having no connection with the internal organs. They asked me to cut the tumour to see what was inside; we could not (with the naked eye) see anything in it but blood. Ph. had not before seen the others cut dead animals up, and was puzzled. He has no clear idea of death, and asked several times, "Why are you killing it?" The other children laughed and assured him that I was not doing so—that it was dead. Presently he said, "Is it dead—nearly?" Again the others laughed and corrected him. He then asked, "Why has it got that lump?" And again several times—"How did it die? Has it got that because it's dead?" Pr. laughed and said, "It died because it had the lump, but Ph. said the other way round, didn't he?" J. as on a previous occasion when she watched a dissection, sat watching very intently, but made no comment of any kind. L. seems to have a clear idea of death, and was interested more in the structure. The elder children identified the organs. C. wanted me to cut the head off, and presently to cut it open to see the brain inside. Afterwards, the children talked about the living mice we had in the summer (we had had to get rid of them in the vacation). C. and Jane had never seen mice at close quarters, and asked whether we couldn't have some more now. Dan asked me to find the old mouse cage, and when I did so, took charge of it with eager anticipation of having more. Pr. has some at home, and told us that her first lot of babies had now themselves had babies, and promised to bring some to school when they were old enough.

Death, active interest, and reasoning.

6.12. The children found some woodlice under the bark of a log, and C. called out, "Look, there are the eggs." They gathered the eggs, and lice of different sizes, and put them into the insect cage with pieces of bark. During the morning they often went back to look at the lice under the bark. Jane and Pr. expressed disgust and would not touch them, but the younger children all did so, and Ph. was especially thrilled by them. *Active interest and fear.*

10.12. Jane spent some time again to-day examining the human skeleton in detail, talking about the various parts, fitting them together, making out where the various muscles would be attached, etc. *Active interest.*

In the evening, Jane and Dan had a "rabbit hospital." They put the small rabbit in a tub filled with straw. Dan put a little sand on the rabbit's back, saying, "It will hurt him *very very* much, but it will take out all the pains he's got." Another treatment given to all the rabbits was "Flash-bomb"—flashes from an electric torch. Dan said, "Let's pretend this rabbit's dead—we can bury him in here (in the straw), and then pretend he's another rabbit that's come." This was done. *Fantasy and identification.*

14.12. Again to-day Jane and Pr. looked at the human bones, particularly the skull, comparing them with their own. They then looked at the backbone, spoke of the muscles, looked at the muscles in their own arms, noticed the

tendons at the wrist and elbow, feeling these with their fingers. Pr. told us she could see her Daddy's muscles very plainly, much more plainly than her own. I asked "What about your mummy's?" "No, you can't see those so plainly—they're rounder and softer." I told her that this was because the female had more fat covering the muscles. Jane and she followed this up in talk for a time.

Active interest.

Spring Term, 1927.

19.1. One of the rabbits had had five young ones during the holiday, four of which had been found dead. The children looked for the one which was supposed to be alive, but could not at first find it. After a time they found it hidden away in a nest made of straw and of fur from the mother's breast. They took it out and looked at it, and noticed that it was like its mother, although darker, and that its eyes were not yet open. We decided to take the daddy rabbit away so that he should not hurt the baby, and Jane, Pr., and I mended an old hutch, putting a new door on—the children doing the measuring, and some of the sawing and nailing.

Death, active interest and tenderness.

21.1. The children discussed whether the rabbit called Pat were male or female, and Pr. said, "Why don't you look?" They did look, and decided it was a male. This followed on having put another male with Pat, and their having fought. There was some talk about the mother rabbit having more babies, and Jane said we should have to put the daddy with her. Priscilla said, "Why?" and Jane replied, "If you don't she won't have any more babies."

Active instinct, reasoning.

24.1. The children found the young rabbit lying outside the hutch dead. They found that it had some wounds in its head, and decided that it must have been killed, either by a cat or a rat. Jane said, "Shall we cut it up?" and I replied, "If you wish to." Later in the day, however, they announced that they had decided not to cut it up, but to bury it instead. Pr. said, "It's so pretty, we don't want to cut it up, we want to keep it." They buried it in a hole, and nailed together two pieces of wood in the form of a cross, to put over it, writing on this, "To Whiskers, child of Benjie and Bernard. Born . . . Killed . . ."

Tenderness and death.

27.1. We found one of the mice dead to-day, probably from underfeeding. The children were grieved, and decided as they had with the young rabbit, that they would bury it, not cut it up. They put a stick up in the shape of a T, in the spot where they buried it.

Death and tenderness.

31.1. The children told me that, jointly with a boy friend, outside the school, they had formed a "Zoological Club." They had each a book in which to record their observations of the different animals—a rabbit book and a mouse book. They showed me the rules of the club, which were three: (1) No animal belonging to the club is to be teased; (2) The animals are to be fed every day; (3) The animals are to be kept clean. They told me they had measured the distance that one of the mice could jump, "and it was a foot."

Tenderness and active interest.

1.2. Jane asked Miss Z. to tell me that the previous evening, when they had had the mice out of the cage, one of them had been killed by having a brick fall on it. Jane was very distressed and could not bear to tell me herself. They had wrapped it up in a piece of paper, and showed me the blood on its nose—they all repeated the sad tale to me, about how it had happened. They said they were not going to cut it up, but to bury it—although there was more hesitation about this than on the last occasion. During the morning, Jonathan, the cat, brought in first one, then another, dead sparrow from the garden. We talked of whether he had killed them or found them dead, but could not tell which. Some of the children wanted to cut them up,

although Dan said, "Let's bury them." The opinion in favour of cutting up prevailed, and we did so. They asked me to open the mouth, and saw the tongue. Pr. asked, "Hasn't it any teeth? No, it *hasn't*. Why hasn't it?" They counted the number of its toes, and saw the way these clung round one's fingers. They noticed the difference between the feathers on the breast and the wing feathers. We then cut open the abdomen and breast. Jane noticed with great surprise the thickness of the wing muscles on the breast, and then she and Pr. said, "But of course it needs big muscles to fly with." They then saw how long the breast bone was, and how much more difficult it was to get at the heart, lungs, etc., inside, than it had been in the case of the mouse. We found the heart and liver, windpipe, and food-pipe, the opening of the windpipe in the base of the tongue, and the external opening of the food-pipe. They noticed the very thick walls of the stomach. Before I began to cut it, they asked, "Has it got a penis?" and when I said, "No, it's a female sparrow," they said, "How do you know?" I told them about the colour of the feathers. They looked at these closely, and asked what the male would be like. I described the black collar, and brighter general colours. We then found an ovary in the bird, and when the children asked what it was, and I told them it was "what made the eggs," and we saw how the eggs would be passed down the food-pipe, Jane said, "It will have to swell, then, won't it?" Pr. then suggested looking again at the parts of the dissected rabbit, and we got them out of the formalin. The children named the parts as they were brought out. Jane cut the liver open, saying in surprise, "Oh, it's all *liver* inside the liver, isn't it?" meaning that it was not hollow. I said, "Look more closely at it and see." She then saw that it was spongy and full of small holes; and found also the gall bladder attached to it. We cut open the eye, and the children saw the black retina, and were able to look through the opening of the pupil from the inside. We compared this with our own pupils, and they saw that the pupil is simply an opening through which one looks, in the case of another person, on to the black curtain at the back. We then found the lens, and I gave them the name. Jane said, "Oh, I know about the lens in a camera," and I replied, "Yes, the eye is made very much like a camera." She asked what the retina was for, and I compared it to the sensitive plate, and the eye-lid to one of the shutters. The children saw also the end of the windpipe in the rabbit's mouth, and the other end where it had been cut off above the lungs—this with a piece of the windpipe attached. Dan did not join in the cutting up of the rabbit, but while he typed kept looking over and listening and joining in the conversation.

Active interest, reasoning, death, tenderness.

9.2. During the morning Miss Y. told the children that she thought that two of the adult rabbits had had more babies, and she could see two dead. We went to look, and there were two evidently just born, lying out of the box on the floor of the shed. It looked as if they had been injured. In the nest box there were six more, all dead, but these did not show any apparent injury. We agreed that perhaps they had died of the cold. The children were very grieved, and when they thought that perhaps the father had killed the babies, they said, "If he does that we will kill *him*—horrid Bernard!" They noted the fur the mother had torn from her breast to keep the babies warm. We brought the dead babies out and buried them. The children said, "Let's take the father away altogether so that he can't do that." Jane remarked, "But then we shouldn't have any more babies. Let's take him away soon."

Death, tenderness, active interest, reasoning.

11.2. There had been another family of baby rabbits, and they had been found dead. Later in the day, the children spent an hour playing "Zoo." One child was the keeper, one a lion, another a lioness (both in the same

cage), and another a "Tigon." Jane explained that this was a cross between a lion and a tiger. The lioness presently had a baby. Miss Y. had to be a visitor at the Zoo, and at each of her visits something had happened—either there was a new baby, or the last one had died, or the lion had been put in a separate cage because of the new baby. (These children had all been to the real Zoo in the holidays.) *Fantasy and identification.*

19.2. Ph. was cutting his orange, and said, "I'm killing the orange. I'm cutting it—that is killing it, isn't it?" *Death.*

21.3. The children took two buckets to the Fens to-day, and brought back frog-spawn, snails, weeds, and water-shrimps. *Active interest.*

25.3. To-day they found a caddis-worm in a Fen pond, and brought it to one of the school aquaria, each of the elder children now having one. *Active interest.*

31.3. The children got fresh water to-day in pails from the river, cleaned out their aquaria, and put some stones in them "for the tadpoles to use when they come out of the water" (in case this happened during the holiday). *Active interest.*

Summer Term, 1927.

26.4. A. showed us an empty cage, pointing out the two holes for the mice to come through from the inner to the outer part of the cage. He then took a mouse from another cage, and put it into this one, explaining the affair to Ph., and watching for it to come through the hole. *Active interest.*

2.5. Jane discovered to-day that the mother rabbit had some more babies. She was very pleased and excited—the expression on her face was very gentle, and she was quick to think what should be done. She took the male rabbit from the hutch and put him in another, and gathered green stuff for the mother. She and the others talked of whether the hutch was thick enough to keep the babies warm, so that they should not die of cold as before. She stole back several times to peep at the babies, but was most careful not to disturb them. *Active interest and tenderness.*

3.5. The children found two birds' nests in the garden, one of which seemed to be deserted, as the eggs were quite cold. They took the eggs out, but broke them in lifting them. *Active interest.*

8.5. The children spent the morning cleaning and feeding the rabbits, mice, silkworms, etc. To-day we had eggs to put under the sitting hen. James asked several times whether we could eat the eggs after the chickens had come out. Miss Y. said, "What do you think?" and after pressing for an answer, he volunteered, "When the chickens come out, the shells will be broken." Miss Y. said, "Will there be anything left in the egg then?" "No." "Then will you be able to eat them?" "Of course not, because there won't be anything to eat," adding, "They're the same eggs as the eggs we eat, aren't they?" *Active interest, reasoning.*

26.4 to 20.5. Much time has been spent in feeding and cleaning the rabbits, and the children have delighted in the family of young rabbits, which have this time been successfully reared. The older children put themselves in charge of these young rabbits, insisting that the smaller children should not disturb them in the early days. They have also watched and cared for the hen on the eggs, and the families of mice. *Tenderness.*

23.5. The children found two of the young rabbits dead: they had apparently got out of the open wire of the cage. They were very troubled about it, but no one suggested "looking inside" the dead animals. One of the younger children suggested that the rabbits had been asleep when they died. The elder ones remarked in the afternoon that one of the dead rabbits was wet, and Pr. after whispering and laughing with C., said, "It passed water when it was dying." *Active interest and death.*

3.6. A few days ago I took a whole calf's head to school. Dan., C., Pr., and Jane interested themselves in it, looking closely at the eyes, ears, skin, inside of mouth, and so on. They tried to cut through the skin, but found it very tough. To-day, as Jane had suggested cutting it open to see the brain, I took a hack-saw, and she and I bi-sected the head. It took a long time, and we had to rest occasionally, and go back to it; but Jane's interest did not flag, and the others kept coming to see how we were getting on, and sometimes took a helping hand. Jane was at first surprised at the "smallness" of the brain, but then she said, "Well, of course, cows are not very intelligent, are they? You wouldn't really expect them to have a big brain." After a time she volunteered, "Then what about the *Diplodocus*! *That* couldn't have been very intelligent, could it, if you look at the size of its head!" (She had seen the skeleton of *Diplodocus carnegii* at S. Kensington a year or two earlier.)

She looked at the folds of the brain, and the blood-vessels on the surface, traced the ear-passage on the skull, and dissected the eye to get out the lens and see the retina. *Active interest.*

Public Secondary Education in France.

BY G. GASTINEL.

(Translated from the French by E. W. Tait.)

FOREIGNERS have some difficulty in judging, or even in understanding, the essential character of public secondary education in France. This difficulty is due to an initial misapprehension. When French people speak of secondary education, they do not mean by this term all forms of post-primary education (twelve to eighteen), but only that section which, leading by way of a seven years' course to the "baccalauréat," opens up the way to the universities. There exist in France several other types of post-primary public education, e.g., supplementary courses which prolong primary instruction, technical schools which, in some cases, give a fairly wide general education, while training the adolescent for a trade. Last but not least, there are the "écoles primaires supérieures" (senior elementary schools), which keep their pupils to the age of fifteen or sixteen, and whose courses, very well attended, lead either to the "certificat d'études primaires supérieures," or to the "brevet élémentaire." It would be well to add to these various institutions the "écoles normales" in the various departments, whose purpose is to train future public elementary school teachers, which take in pupils at about fifteen, and present them at eighteen or thereabouts, for the stiff examination of the "brevet supérieur."

This explains the relatively small number of young people attending public secondary schools. In these institutions, "lycées" (State secondary schools), "colleges communaux" (municipal secondary schools) and courses for secondary pupils there are rather over 100,000 pupils between eleven and eighteen, including about 70,000 boys and 30,000 girls. In other words, there enter our public secondary schools each year about 10,000 boys and 4,300 girls, a relatively small number compared with the total number of the generation. But if one adds to these 14,300 children, those who each year enter private secondary institutions (about 7,000) and if, on the other hand, one remembers that secondary education is intended to be reserved for the instruction of our élite from which are to be drawn the members of the liberal professions and the best of the university students, it is easily understood why the figures are not higher.

It is precisely in order better to adapt public secondary education to this rôle of selection, to this task of education, that the later reforms, those of 1924 and 1925, have been introduced. From 1902 till then the secondary course consisted of two successive stages ; one of four years, including the four lower forms (sixth, fifth, fourth, and third), the second of three years, including the three upper forms (second, first, " philosophy " or " mathematics). In the first stage there were two parallel courses ; course " A " with Latin in six and five, and Latin and optional Greek in four and three ; course " B " with neither Latin nor Greek. At the beginning of the second stage came a division into four parallel courses : " A," Latin and Greek ; " B," Latin and Modern Languages ; " C," Latin and Science ; " D," Science and Modern Languages ; all leading up to the first part of the " baccalauréat," which had as many sections as there were courses. Pupils getting through the first part of the examination had then the choice between philosophy and science, and took the second part after a year's further study.

Even before the Great War criticism had been levelled at this system. The first complaint was that it divided the course into two stages, one of which led nowhere, and it was the case that, in the State secondary schools at least, pupils seldom left at the end of Class 3. It was pointed out, also, that there was a distinct drawback in introducing so marked a separation between literary and scientific culture, and that the option between the courses was forced too early, since Course " C " of the second stage was the only one which combined the study of mathematics, physics, and natural science with that of Latin.

The Coalition Government which was formed immediately after the war undertook the task of reforming secondary education, bearing in mind these points of criticism. It abolished the two stages and attempted to make Latin compulsory for all pupils for four years (from the sixth to the third) and Greek for two years (in fourth and third). From second onward there was added a " B " course with neither Latin nor Greek, but it was not expected that anyone would enter it. The science syllabus, lighter than in the old " C " and " D " courses, was the same for all till the end of Class 1. Thus, to the principle of gradual divergence towards specialization the reformers opposed the principle of the fundamental unity of all secondary education ; to the possibility of a shortened course they opposed the obligation of a lengthy continuous course ; to the balance, laboriously established in 1902, between classical and modern humanities, they opposed their belief in the supremacy

of Latin. On this last point the retrograde nature of the movement was so obvious that public opinion declined to support the author of the reform. Teachers of arts subjects themselves, while convinced of the superiority of classical studies, could not deny to French and modern foreign languages high educational value. As for teachers of science, they viewed with great anxiety the abolition of Courses "C" and "D," which had formerly enabled them to push on pupils in mathematics and physics, and they likewise pointed out the fact that, in France, secondary education is the preparation for entrance to the great science schools, the "école normale supérieure," "école polytechnique," and "école centrale," whose entrance competitions are a very stiff test.

But the most serious criticism of the new curriculum was that it hindered the normal entry of lower-class children into the public secondary schools. To understand the weight of this grievance, it must be remembered that France is, of all* civilized countries, the one in which the State plays the most direct and the most active part in the work of national education, so that scholastic institutions must, of necessity, be adapted to the principles of government, and conform to the spirit of democracy. One of the first requirements of this spirit is that lower-class children, those attending primary courses in public elementary schools, should have facilities, provided they are fitted for such instruction, of taking up and carrying on secondary work, as do better class children. Now in practice what most frequently happens is that the end of the primary course is reached at twelve and a half or thirteen, so that children, who take the examination for the leaving certificate, instituted by regulation, are a year behind the normal age for going into the sixth, the lowest class in secondary schools. This drawback can be overcome, where these institutions have a modern side, since good pupils, who enter late, may be placed not in the sixth class, but in the fifth, where, by concentrating on modern languages, they may overtake their classmates. Things are quite different if there is only a classical side, where their late entry affects simultaneously Latin and a modern language.

The elections of 1924 having transferred the Parliamentary majority to the Left, this reform was condemned, just as it was being put into practice, and by 1925 a new curriculum was instituted. This scheme retained the principle of the unity of secondary education founded on a broad cultural basis, and for that reason it, too, postponed, until after the sixth year of the course, all scientific

* *i.e.*, countries of intellectual culture and political liberty.

specialization ; but from the beginning to the end of the course, it allowed for two parallel sections, one including French, Latin, with optional Greek, and one modern language, the other French and two modern languages, one begun in the sixth class, the other in the fourth.

Such is the system which is still in operation in France. From the beginning, i.e., 1925, it applied equally to girls' secondary education*. Created in 1880, by Jules Ferry and C. Sée, this system had been organized with great care ; and, so as to avoid being accused of undermining family life, the founders had striven to make it definitely unlike boys' secondary education. It was shortened (five years instead of seven), Latin was excluded, and feminine and domestic arts given a place in it. It led merely to an internal examination the "*diplôme des études secondaires*." For twenty-five years the institution worked very successfully. But economic and social conditions were changing, the middle class felt the need to provide girls with a profession and the feminist movement claimed for them right of access to the universities. Gradually the custom grew up, in State secondary schools, of organizing, at the expense of families interested, special courses for girls which prepared them, more or less satisfactorily, for the "*baccalauréat*," especially for Course "B," Latin and modern languages. The system grew complicated and lost sight of its true aims. It badly needed putting in order. But for the war this would have been done in 1914-15. It was actually accomplished ten years later. To-day girls' secondary schools, State and municipal, follow almost the same curriculum as boys' ; pupils remain the same length of time (seven years) ; there is a choice between the classical side with Latin and Greek, and the modern side with neither, both leading up to the "*baccalauréat*." There still exists a course leading up to the "*diplôme des études secondaires*," but it differs from the modern side merely in detail.

All along the line, therefore, there has triumphed that conception of secondary instruction which regards it as the true education of the mind, whose aim is to give to all young people, either by the study of ancient or of modern languages, the same broad, harmonious culture. One has only to read the instructions, published in 1925, to be aware of the unity of purpose dominating this vast educational system applied to a whole nation by a strongly centralized government.

* The initiative towards bringing the two types of education into line came from the authors of the 1924 reform.

One cannot fail to be struck by the ambitious nature of so wide a curriculum imposed on young people. But two things must be taken into account : the first is that the teaching staffs of the State secondary schools are selected by means of competitive examinations which ensure that they shall be well qualified for the responsible task entrusted to them. Two very original institutions have as their aim to train these teachers and select them : “ the *école normale supérieure* ” and the various competitive examinations for the “ *agrégation*.” The restricted scope of the present article prevents me from entering into detail as to the working of these institutions ; I can only say that the “ *école normale supérieure* ” trains the best of the university students for three consecutive years of collective work, giving them at the same time general culture and a scientific outlook, and that among the “ *licenciés* ” (pass graduates) the “ *agrégation* ” ensures a very strict choice of specialist teachers. The other point to be noted is that French boys and girls, gifted generally with a keen, inquiring and precocious intelligence, have to submit, in State and municipal secondary schools, to very hard work, both in school and out of it.

Whether this work is not too hard and likely to overtax young minds, by demanding of them concentration on subjects so varied as science and arts, is the burning question of the moment, and one which a special commission has been appointed to investigate ; but we need not wait for the results of this inquiry to discover the conditions which alone can assure that French secondary education will give good results ; I shall mention only two of these ; one is complete agreement among the masters as to the methods they employ, and perfect co-ordination so that their efforts may have unity and thus facilitate the pupils’ task ; the other is the careful and farseeing selection of pupils which will restrict the opportunities of education in State and municipal secondary schools to those pupils best qualified to profit by it.

How is such selection to be secured ? That is to-day the crux of the problem, the point on which more and more the activity of politicians is being concentrated. As soon as the war came to an end the feeling of national unity, strengthened by suffering endured in common, made the parties of the Left regard it as an impossible state of affairs that French culture, provided by the efforts of the State and under its supervision, should not be equally accessible to all the children in the country. Doubtless, in theory at least, there was nothing to hinder a child, whatever his family, from taking his place on the benches of the State secondary school ; each year

an examination, open to all, selected the holders of scholarships, the cost of whose education was defrayed wholly, or in part, by the State. But in practice these scholarships were hardly ever awarded to the son of an agricultural worker or a labourer ; many of them were awarded to the children of less well-to-do middle class families, of small shopkeepers, of civil servants. This became very evident when education had to be provided for children who had lost their fathers in the war and become the wards of the State ; the mothers belonging to the middle class nearly all requested that their children should be sent either to a State or a municipal secondary school—both fee-paying. The others were satisfied with elementary schools—or senior elementary ones—where instruction is free, so that the grants voted by Parliament served to extend still further the advantages of a social class in relatively easy circumstances, rather than to raise the intellectual level of the poor.

It was then that the idea of one single type of school took shape. This idea was brought forward and supported by the “ Compagnons ” (trade guilds) group. It may be summed up thus : the State should take no account of the social status of families but merely of the personal aptitudes of the children. It is only the most gifted, and the hardest working, who have the right to carry on their studies for a prolonged period, and to an advanced stage, in public educational establishments, and the best means of selecting suitable pupils is to give all children during the period of primary education one and the same type of instruction.

Certainly this uniformity of primary education had already been attained so far as syllabus went, but in actual fact, fee-paying elementary classes existed, in addition to secondary classes, in all secondary schools, State and municipal, and in State schools, at least, these classes were entrusted to selected masters chosen for the lowest forms (eighth and seventh) by means of a special certificate. The State seemed, therefore, to recognize that parents, capable of paying, had the right to expect from it special attention. An attempt was made to put an end to what constituted in practice a privilege, by two measures : the first abolished the special examination for the selection of masters for Classes 8 and 7 in secondary schools ; the other threw open, without payment, all elementary classes in secondary schools, so far as there were places vacant. While inspired by a generous idea, these measures made the mistake of imposing, or of seeming to impose, a spirit of liberalism. The effect of the first was merely to lower the standard of teaching in State secondary schools ; while the second, whose aim was to broaden

the basis of attendance at secondary schools, remained ineffective. Poor families did not care to remove their children from their own social class by taking them from the municipal elementary schools and sending them to the State secondary ones, and the elementary teachers in those schools preferred to keep their pupils, particularly if they were good ; finally better class parents who were still paying fees for their children, claimed free instruction, since it was being granted to others out of pure charity.

More happily conceived, and more effective in operation, was the measure which increased considerably the grants for scholarships. The authorities were no longer satisfied merely to relieve families of the cost of board and tuition. Allowances were even made to necessitous parents to compensate for the wages which their children, through staying on at school, were unable to earn in factories.

A more radical reform is now being carried out ; that is the establishment of free secondary education. This is how the reform is being tackled by Parliament. There exist in France a certain number of secondary schools (about a hundred) municipal and State, with each of which is connected a senior elementary school, i.e., one of those post-primary institutions which prepare their pupils for the " *Brevet élémentaire*." The ordinary course in such schools lasts for four years (including a preliminary year), and instruction in them is free. In secondary schools, which have one of these senior elementary sections, it generally happens that, for certain subjects, the pupils in the preliminary class are grouped with those of the secondary sixth—those of the first year with the fifth, and so on. In reality it is only in the case of Latin that such a combination is impossible. In such conditions it was highly irrational to take fees for the tuition of secondary pupils when those in the senior elementary school got the same tuition free. It was, therefore, decided that the four parallel classes should be free. Then the principle was extended to all classes in such mixed schools, so that for a town to have free secondary education all that was necessary was that it should have, attached to its secondary school, a senior elementary school, whilst in other places secondary education remained fee-paying. Such an anomaly could not last long, and this year Parliament has before it a Bill instituting free secondary education in the lowest class (sixth) of all secondary schools, an arrangement which will, of necessity, be extended from class to class, and year to year, until it covers the whole of secondary education.

This reform will doubtless have far-reaching consequences : the first will probably be to discourage still further the competition

which private schools even now offer to public schools, so that the latter will influence a larger number of boys and girls. The second, closely connected with the first, will be to restrict exclusively to wealthy families the possibility of giving their children a secondary education, other than that provided by the State. Thus the State schools will have the opportunity of forming the élite of the nation by drawing together in a common educational system almost all classes of society.

There is no denying the democratic generosity of these new laws, but it must be admitted that, while in principle they satisfy the ideal of equality, they do not yet practically solve the problem of national education as set by the supporters of the one single type of school. They prepare the way for a solution, they may even facilitate it, but they do not make it inevitable. The only thing which matters here is to ensure the normal entry of the most gifted children into the secondary schools. Now it is just this selection which it is difficult to accomplish at a given moment. The scholarship competition, however wide in its scope, cannot alone suffice ; only such scholastic and administrative organization as would permit of the pupils being tested for a certain length of time as to their individual aptitude would give an opportunity of directing them in a rational manner, either towards a technical training, to the senior elementary school, or to the secondary.

This is what has been attempted at St. Amand des Eaux (Nord) by a Socialist administration. In one and the same block of buildings there are housed an elementary school, which all children attend up to the age of about twelve, a technical school, a senior elementary school, and a secondary school—non-fee-paying, since all pupils hold municipal scholarships. At the conclusion of their elementary course all the pupils are divided between the technical school and the senior elementary ; for the first year of senior work shortened courses in Latin and English are given to pupils whose capacity seems to indicate that they are suitable for a secondary course ; if the experiment succeeds they are transferred the following year to the secondary school and placed in Class 5, where, without being too far behind, they can enter the course leading up to the “baccalauréat.”

There is no obstacle to the organization after this model, in each department, of an office for the vocational guidance of pupils, under the supervision of the “Inspecteurs d'Académie,” which would collect, with regard to promising pupils, a wealth of exact information. The scholarship competition would merely add one more to the observations noted during the elementary course.

Pupils, whose suitability was still dubious, might be placed in a secondary school, which had a senior elementary section, and the selection would be made, as in the mixed school at St. Amand, with this difference, that the secondary school would have a regularly organized sixth class. The essential thing would be to enlighten tactfully and advise wisely poor parents who are so often ignorant of the true interest of their children. I say advisedly "tactfully" and "wisely," for in France, more than elsewhere, one must beware of doctrines, seemingly simple, which, misinterpreting facts, and conceiving of society as a collection of individuals, forget that the home environment collaborates with the school in the education of the child, so that the intellectual level of the family is an important factor in national education. Therefore it is not merely a question of substituting for the frequently anarchical liberty of the parents the mechanical device of a public service. Our desire is that parents should be able to imagine the possibilities which lie before their children, that they should realize the fact that certain types of mind may profit by studies which appear of no practical utility. The sound good sense of our country folk and the lively intelligence of the workmen in our towns are inadequate to reveal these things to them. They require an enlightened guide to open their eyes, and, if need be, convince them. If French families learn to take advantage of the opportunities offered by the State, and if the State does not expect of laws what ought to come from custom, our secondary education will undoubtedly maintain, in the society of the future, a place worthy of that which it held in France of bygone days.

Training Colleges and the Teaching of History.

BY T. W. SUSSAMS

I.—THE PROBLEM.

THE elementary school teacher is expected to be a Jack of all trades, capable of teaching all class room subjects to junior forms. Most of the matter for this teaching is acquired during his secondary school career. His college course is designed to equip him with the technique of his future profession and to offer him facilities for further study in those branches of knowledge for which he shows special aptitude or liking. On this general assumption have been based the organization and curricula of most training colleges. In one subject at least the assumption has proved unwarrantable. Asked to give lessons on certain characters or periods in history, students again and again excused themselves on the score that they "hadn't done that period in school." The defect proved so general and its cramping effects on teaching practice so marked, that more positive information was sought concerning the nature and scope of the history teaching in secondary schools.

II.—AIMS OF THE ENQUIRY.

With this end in view a questionnaire* was drawn up and circulated among the students of three colleges, one in the south of England, one in London, and one in the Midlands. In this way it was hoped to obtain a selection representative of current practice in the schools. The replies returned came from all types of schools; boys', girls', and dual; municipal, grammar, and public; urban and rural. The area tapped extended from Sunderland to Brighton, from Cornwall and Chester to Norfolk and Kent. Further, the general tendency of the replies of the three colleges when coalesced as a summary in no way contradicted the verdict of any college considered individually. Thus, although the total number of questionnaires filled in and returned was rather small (249), the net was cast sufficiently wide for the results to be significant without pretending to be mathematically accurate. The enquiry aimed at clarifying two main issues: whether the inadequacy of historical knowledge prevalent among training college students was due to the unsuitable nature of

*See Appendix.

the subject itself, or whether history was spoiled in transmission to the growing mind by the damaging influence of class room conditions, faulty teaching technique, or neglect as compared with other school studies.

III.—ITS LIMITATIONS.

Before proceeding to examine the results of the enquiry, one or two limitations imposed by its nature must be considered. Only candidates for the teaching profession were catechized. This cuts out all those pupils who leave school to enter other professions or the commercial and industrial world, and restricts the field to those who have presumably pursued a more or less academic course and have successfully negotiated at least the obstacle of the first school examination. Any special provision of the school for teaching history with an economic or commercial bias will therefore be unreflected in the replies. Yet this consideration should not bear undue weight, for rightly or wrongly our schools stand or fall by examination results designed to test a general rather than a vocational education. Thus, in listening to the testimony of witnesses who are without exception successful examinees, we are hearing the evidence most calculated to favour the schools. It does not necessarily reflect everything the school is doing, it does reflect the most successful and the most typical work. Perhaps, too, in asking these witnesses to recall impressions received sometimes as far back as seven years ago, we are inviting inaccuracy of statement, but again the risk of general falsification is slight, for most of the factors that make for good teaching in history are as evident in the last year as in the first, in the single lesson as in the course as a whole.

A much more serious objection to the validity of the enquiry can be raised. It by no means follows that the course a particular student pursued was either the usual or the best course that the school provided. Absences, rapid promotion, failure at an examination, shortened school courses, changes of staff or removal from classical to modern side, may all throw a well-ordered syllabus out of gear, and render what was in conception coherent, logical, and complete, in practice, haphazard and fragmentary. But at the same time the school that fails to cater for the brilliant pupil as well as the dullard and mediocre is not fulfilling its function perfectly. It is possible to plan syllabuses, concentric in the early forms, periodic in the certificate and post-matriculation forms, so that a pupil who studies history for only three years of his school career is certain to have covered the outline of the national story and studied some

selected period in greater detail. Moreover, flexibility within the school's class system, ease of transference from one side to another without undue displacement, are among the essential characteristics of an efficiently organized school. This criticism levelled against the procedure followed, far from being a consideration vitiating the whole enquiry, is really an acid test of the keenest kind. It separates teaching inspired by an honest attempt to do the best for every individual from teaching strangled by a rigorous class tradition or a bloodlessly efficient organization.

With these qualifications in mind the returns can be examined.

IV.—HISTORY AS A SUBJECT OF INSTRUCTION.

Enthusiastic teachers of history claim for their subject remedial qualities, peculiar virtues, and cultural values such as no other subject can give. Their sentiments are echoed from time to time, in less extravagant terms, by the public press or from the political platform. Nor is this universal panegyric violently contradicted by the voice of the children themselves. Over 70 per cent. express a liking for the subject, 75 per cent. read historical novels, and 46 per cent. continue to read more serious historical works for recreation when their school days are over. But with few exceptions the liking for history either develops late or is strongest late in school life, whereas the 22 per cent. who frankly dislike the subject have had an aversion for it all through their secondary school life. This seems to indicate that for the majority of children history is naturally interesting and that as they reach adolescence their interest tends to increase, but that there are some scholars in our schools whose love for history is early turned to hatred by the conditions under which it is taught. One or two questionnaires are particularly illuminating on this point. "History lessons consisted in dictated notes which we had to copy down ready for the eternal test next day." "History in the lower forms consisted chiefly of reading aloud round the class, therefore hate of the subject." Again more strongly, "I do not know why I don't like history, but the 1815-1900 period was dinned into me until I knew it off by heart and I was thoroughly tired of it. We did the work by learning chapters."

Those who safely negotiated the trials of the lower school pay tribute in the upper forms to the content of history or the inspirational quality of the teacher. But it is always personal characteristics of the specialist that are praised, never his method of presenting history. "The enthusiasm of a keen historian filled me with a desire

to know the why of history. This was gratified, to a large extent, in the upper forms." "This particular history master was keen on history and he made me keen on it . . . Other history masters dictated us notes—we learned them and there the matter ended." "In Form VI we were left to probe into the mysteries, joys, and horrors of history for ourselves. This made it live and interesting." "In Form IV we were given a surfeit of facts in order that we might pass school certificate." From these quotations and others in a like vein it seems that history is rightly a school subject but that just those values which entitle it to a place in an already crowded curriculum are frequently destroyed by the poor teaching methods employed.

V.—EFFECT OF EXAMINATIONS.

The weak teacher excuses his incompetence on the grounds that the necessity of obtaining examination results compels him to the dull grind of which so many students complain. That many teachers allow their courses to be dictated by the supposed needs of the examination is proved by the questionnaires. From the answers given to questions 10 to 16, the courses were graded into three categories. A Grade A course was one which covered the outline of the national story presented in a logical or chronological order. A Grade B course was one which omitted some significant epoch (e.g., 1066-1485), but treated in an orderly fashion the periods that fell within its limited scope, while Grade C was reserved for courses that were without any evidence of thoughtful planning and that also left untouched large portions of British history to which some importance is attached. In this last category nearly 40 per cent. of the courses fell. Grade A claimed a bare 20 per cent., the remaining 40 per cent. being allocated to Grade B. These figures are all the more depressing when we remember that 36 per cent. of our students attended a secondary school for more than five years, that 60 per cent. of them attended for between three and five years, and less than 4 per cent. had less than three years at a secondary school. Undoubtedly the swollen proportions of Grades B and C are accounted for by the tiresome repetition of the same narrow field that goes on sometimes three years before the school certificate form is reached. If the examination results were good one might perhaps tolerate this position, but of all the subjects offered by more than 50 per cent. of the pupils at the first school examination, history results

are the worst.* This cannot be due to the poor calibre of the examinees in history, for the pupils who do fairly well in other subjects are the same pupils who score a much less marked success in history. It might be that the history paper itself is an inadequate test of the best possible performance of any examinee, but although we all deprecate the necessity of an examination system, the examiners in history have not been singled out for criticism any more virulent than that meted out to their colleagues in other subjects. Moreover, at one stage the history teaching meets with conspicuous success. In the second school examination history occupies a position of honour among the favoured subjects.† It is second only to English, leaving its rivals, French, Mathematics, Physics, and Chemistry, well in the rear, and exactly reversing the result of the first school examination. Yet the general conditions of the first examination are comparable to those of the second, and the general level of examinees, though higher, is equal as between subject and subject. History demonstrably can be taught successfully, but evidently the technique which is so successful with pupils between the ages of sixteen and eighteen is not suited to pre-matriculation forms.

VI.—METHOD IN HISTORY.

What technique is employed? That there are teachers with some freshness of outlook is shown by the constant stream of books on method issuing from the press. That there are even a few daring

*Examination statistics published in A.M.A. Year Book, 1929, page 105 :

| <i>Subject.</i> | <i>Per cent. of entrants offering.</i> | <i>Per cent. of passes with credit.</i> |
|------------------------------|--|---|
| English | 100 | 60.7 |
| Elementary Mathematics | 93.6 | 52.7 |
| French | 98.5 | 47.8 |
| Geography | 67.8 | 47.8 |
| History | 88.0 | 42.3 |

†Examination statistics published in the A.M.A. Year Book, 1929, page 106 :

| <i>Subject.</i> | <i>Per cent. of entrants offering.</i> | <i>Per cent. of passes.</i> |
|-------------------|--|-----------------------------|
| English | 36.4 | 79.9 |
| History | 34.5 | 78.1 |
| Mathematics | 43.6 | 71.4 |
| French | 38.7 | 71.3 |
| Chemistry | 27.8 | 70.6 |
| Physics | 29.5 | 61.2 |

innovators in the schools is indicated by the occasional reports appearing from time to time in the various professional journals. But how far the fruits of their labours are becoming commonplaces of daily practice is a very different question. The raw material is at hand ; 70 per cent. of the schools are provided with a collection of standard works for reading and reference, 75 per cent. of their pupils had access on the premises to a library of historical novels. The only thing lacking was the incentive to read and direction in reading. These can only be supplied by the teacher, but when his influence is restricted, as it was in nearly 40 per cent. of the cases, to the one sphere of dictating notes, even personal inspiration is bound to be lacking. As for other devices, they are almost entirely neglected. The use of time-lines has been preached in and out of season for the last twenty years at least. They are to the history lesson what maps are to the geography lesson, and yet despite the opportunities they offer for active co-operative work only 15 per cent. of the schools interrogated regularly employ them. And it is probable that even this low estimate is unduly favourable to the schools, for although some students answered in the affirmative to question 24, from other evidence on their papers it was clear that they were confusing time lines with a simple date chart. In compiling the percentage no allowance was made for this fact. The use of diagrammatic summaries, pictures, plans, etc., is scarcely more common, only 30 per cent. of the students having worked with their help. Documents, in spite of the many interesting collections available, in spite of the crusading of such an advocate as Dr. Keatinge, and in spite of the freshness and reality which their intensive study can bring to the history lesson, are similarly neglected. Over 80 per cent. of the students entering college had made no acquaintance in any systematic way with original sources although 36 per cent. of them had studied history for more than five years ! The replies to the question concerning the holding of debates were more satisfactory, well over 40 per cent. of the students holding historical debates during their school course.

VII.—SUGGESTED SIGNIFICANCE OF THE RESULTS.

Why debating, perhaps one of the least fruitful methods of enlivening history teaching, should be singled out for this mark of approval while the others are so shamefully neglected is significant. Debating has the sanction of the university. The best examination results

in school are obtained by students of a university type working under conditions which approximate to those of the university lecture and seminar. These facts admit only one explanation. History specialists are in bondage to the university not only for the matter but also for the manner of their teaching. This conclusion was strengthened by the one discrepancy in our questionnaires. The number of students who had come into contact with other than traditional methods was markedly greater in one college than in either of the other two. The tendency is illustrated by the following figures :

| <i>College.</i> | <i>Per cent. using time lines, etc.</i> | <i>Per cent. using dictated notes only.</i> |
|-----------------|---|---|
| A | 18.9 | 26.8 |
| B | 11.8 | 44.9 |
| C | 13.7 | 36.9 |

College A was a mixed college drawing its students from dual, girls' and boys' schools. Are the more favourable results of College A due to a larger proportion of its students coming under the influence of women teachers than in Colleges B and C? Unfortunately there was no way of deciding, for the sex of the writer was not always indicated on the reply. Women teachers notoriously pay more attention in general to the technique of their profession than men. They have been forced by circumstances and convention to seek their qualifications in a fashion less stereotyped than that of the men. Possibly we can here trace their influence in the schools.

VIII.—CONCLUSIONS.

That, however, is a matter of conjecture. The indubitable fact which this questionnaire has revealed is that the large majority of our students come into college knowing nothing of the variety of treatment to which history lends itself. Ultimately reform must come from two quarters. The various examining bodies must abandon the restricted syllabus which tests only the work of the final year, and substitute papers on the whole of the national story with selected topics or periods for more detailed study. Vicious cramming will still go on. That is the fault of the teaching not the examination system. But a premium will be placed on the more orderly arrangement of a syllabus and the challenge of preparation for such a test will raise the vital problem of selection. The subtleties, the generalizations, the wealth of detail that constitute the charm of history for the adult mind, are out of place with children under

sixteen. The whole of history has to be re-thought in terms of the child mind. Temporarily history becomes simple, dramatic, and episodic. Vital facts are deliberately omitted in order to render intelligible others no less vital. But by thus falsifying history we shall make it possible for a true concept of history to be attained earlier and more pleasantly. The day when such a happy state of affairs will be common is unfortunately still remote. Examinations remain unreformed, specialists have not acquired the right attitude of mind to their subject, and the products of bad teaching and misconceived examinations stream in through the doors of the training colleges to the number of several thousands each year. They suffer from paucity of knowledge, poverty of outlook, and the dead weight of the university tradition. What are we to do with them?

IX.—THE SPECIFIC FUNCTION OF THE TRAINING COLLEGES.

Our duty is two-fold. As selected students they demand intellectual fare of a very high order. The appeal of history lies in its qualities as a thought-provoking subject. These qualities are inseparable from the oneness and continuity of history. It therefore seems a mistake to attempt to cover in the two short years at our disposal the whole course of British history. Richness of treatment can only be obtained at the cost of breaking the narrative, continuity only at the sacrifice of depth. Equally mistaken is the policy of choosing a too restricted period (e.g., Modern European, 1789-1918), for although this can be studied in detail, opportunities for comparison with other ages are present only in the mind of the lecturer, and, more serious still, none of the many lacunæ left by the secondary school course are filled at college. A good plan will therefore combine profundity of treatment with an extended range through time. Such topics as the Evolution of Parliament or the Story of the Empire seem to meet these requirements. Further they can be treated in other than a traditional manner. Our students are not only in quest of learning themselves but they have to discover how to impart a love of learning to children far younger than themselves. Our second duty is to help them to solve that problem. Turning the training college into a shadowy imitation of the university without its opportunities for careful scholarship or fruitful leisure will not help us. The formal lecture must not monopolize the programme. It has a function and an important one to discharge, but to make it the be-all and end-all of a student's contact with history is to court

disaster. The students themselves must prepare diagrams, draw large scale maps, deliver lecturettes, and construct time lines to illustrate their course, just as scholars in a senior school would do. The products of their labours should be utilized on schools' practice, and suggestions for improvements on old or extension along new lines welcomed. Alternatively to the conventional thesis usually presented by the better advanced course students, those who show special aptitude for teaching might be encouraged to investigate and report on some little problem connected with the technique of history teaching, rather than to spend the whole of their energies rehashing what other people have said about Simon de Montfort, or minutely recording the varying fortunes of their parish church. In this way the training college will fulfil its dual function. It will furnish opportunities for watching the pageant of history and it will reveal the many possibilities for varied treatment that the history lesson provides.

APPENDIX.

QUESTIONNAIRE USED FOR THIS ENQUIRY.

Name..... School leaving age..... School.....

- (1) What form were you in when you left school ?
- (2) In which form did you begin the study of history ?
- (3) " " " " " " end " " " " " ?
- (4) Did you like history ?
- (5) In which form did your liking (distaste) develop ?
- (6) In which form was it strongest ?
- (7) Did you like (hate) any particular historical period ?
- (8) Which period do you know best ?
- (9) Can you account for this ?
- (10) Which period of history did you cover in your First year ?
- (11) " " " " " " " " " " " Second " ?
- (12) " " " " " " " " " " " Third " ?
- (13) " " " " " " " " " " " Fourth " ?
- (14) " " " " " " " " " " " Fifth " ?
- (15) " " " " " " " " " " " Sixth " ?
- (16) " " " " " " " " " " " Seventh " ?
- (17) What text-books did you use ?
- (18) In which form did you start keeping a note book ?
- (19) Were notes dictated or free ?
- (20) Had you a collection of standard history books for reference ?
- (21) In which forms did you have access to them ?
- (22) Had you a collection of historical novels ?
- (23) In which forms had you access to them ?
- (24) Did you make frequent use of time lines ?
- (25) Did you ever make time lines yourself ?
- (26) Did you make large use of pictures, diagrams, charts, etc. ?
- (27) Did you yourself make or collect these ?
- (28) Did you study local history or civics ?
- (29) Did you hold historical debates, mock trials, etc. ?
- (30) Did you use documents ? If so, in what forms ?
- (31) Do you read historical novels for pleasure now ?
- (32) Do you read history for pleasure now ?
- (33) Have you preference for any particular form (e.g., biography, political, contemporary, etc.) ?

Dates versus Centuries in Teaching Chronology to School Children.

BY W. H. WINCH.

PART I.

I.—THE PROBLEM STATED.

It is agreed now, that to obtain some sort of chronological sequence in our historical teaching, we should teach and learn about persons and events in chronological order: it is agreed, indeed, that we must do more, that we must insist on some form of chronological scheme into which the persons and events of history may fit. Some first-rate teachers say, "Teach dates"; other first-rate teachers say, "Teach centuries." Let us take the arguments in favour of the latter first. They were thus: that centuries are natural divisions of time, that they can be shown conveniently as equal spaces in either vertical or horizontal sequence on a chart, that such visual diagrammatization is a valuable aid psychologically, that even the relative absence of events or emptiness of spaces in some centuries is, of itself, an advantage as indicating their relative unimportance: that children find it easier to remember a century than a date, and that it is not only easier, but quite adequate, since we adults only carry and retain vague notions of chronology such as are implied rather by centuries than by dates. Even well-educated adults know very few dates; and all of us tend to locate events chronologically by some such devices as "the month before our Susie was married," or "before the Norman Conquest," or "Pre-War." Why then burden a non-retentive memory with more than we really want or can actually retain? If that is all we really require, the spatial location into centuries will do this for us without learning dates. Those who believe in dates rather than centuries argue: that whilst absolute or metaphysical time flows evenly, historical time does not; that a natural division of space is not, necessarily, a natural division of time; that important persons and events cluster in time, and do not in any way proceed by equal temporal or spatial divisions; that centuries are not natural divisions historically, they are arbitrary chronological divisions; that the spatial pedagogical aids provided by a century chart can be provided by a date chart, though perhaps not quite so well. It is also argued on the side of dates, that children learn the more definitely individualized fact more easily than one which may be applied to a number of other events—there is only one date to one event and one event

has only one date ; whereas, whilst there is one century to some events there are several events to one century ; that it is true that children will confuse their dates, but will they not also, and more so, confuse their centuries ? It is argued that children must have some definite dates, at least for initial learning, a consideration which has led the Board of Education, in its valuable " Suggestions to Teachers," to make the rather retrograde proposal that they might learn the dates of the Kings and Queens of England as a sort of outline scheme into which other events might fit chronologically. And lists of the Kings and Queens are beginning, though very sparsely, to appear on the walls of class-rooms. I have put the matter to several intelligent Standard VII classes, and they have quite unanimously rejected it in favour of the dates of outstanding events and persons. And it is finally argued that the vaguer and weakened form of chronology which educated adults retain *is* a weakened form of something more definite ; it is a residue resulting from accurate learning done previously, and would not now be as good as it is had it been *learnt* originally in its weakened form. Let us try the issue experimentally.

II.—A FIRST EXPERIMENT IN A GIRLS' SCHOOL.

(I) THE CHILDREN WHO DID THE WORK.

The children who did this experiment—the first to be conducted by me on this topic—attended a west-end school, not of the highest social class. If the elementary schools of London were grouped into five social classes, "A," "B," "C," "D," and "E," with which grouping, by the way, the general intelligence of the children generally coincides, this school would occupy a fairly good place in the third or "C" class. The first class, consisting of Standard VII (30 girls), the second class of Standard VI (30 girls), and Standard V (12 selected girls) worked through the experiment. The twelve girls from Standard V were added in order to increase the number of children taking part in it. These twelve girls were representative of the various grades of mental ability within the class, four being above the average, four of average ability, and four below the average. In order to divide the children into two groups equal and parallel in their knowledge of and their capacity to acquire the chronological aspect of history, tests were set extending over three weeks, and the children were allowed as long as they required in order to answer the questions. These were the Preliminary Tests on the results of which the children were divided. Then each group

had a specific number of lessons on history, carefully spaced and at equally favourable times. In one series of lessons (they were the same in every other respect, and, of course, given by the same teacher) the century was taught, and in the other series of lessons the date was taught. Then some study periods intervened, in which the girls studied their notes of the lessons, and finally some further chronological tests concluded the experiment, on this occasion limited to the specific lessons which had been given.

(2) THE PRELIMINARY TESTS.

Each test comprised ten questions, and each dealt with one person or event. One of these sets of questions was given in each of three weeks, beginning on Wednesday, November 10th, 1926, at 10-45 a.m.

Some samples of actual questions follow :

Question I of the first set of tests : When did Julius Cæsar come to Britain ?

- (a) Write down the date if you know it.
- (b) Write down the century if you know it.
- (c) Write down any other way in which you could tell the time of the event.

Question 3 of the second set of tests : When did the Great Fire of London take place ?

- (a) Write down the date if you know it.
- (b) Write down the century if you know it.
- (c) Write down any other way in which you could tell the time of the event.

Other questions dealt with Magna Carta, the Battle of Bannockburn, the Discovery of America by Columbus, the Hampton Court Conference, American Independence, and the Battle of Trafalgar. We were a little anxious as to the results of these chronological questions, which ranged pretty well over the whole of English history, for the history syllabus for Standard V comprised the period from the coming of the Romans to the end of the reign of the Plantagenets, 55 B.C. to A.D. 1485, the Standard VI syllabus, the Tudor and Stuart periods, A.D. 1485 to A.D. 1714, and the Standard VII syllabus, the Hanoverian period. Standard VII had received the earlier lessons and Standard VI had also, of course, received the earlier lessons, but Standards V and VI had not received the lessons on the later periods. There were then twelve questions out of the thirty which could not be answered by the selected Standard V girls on their syllabus, and four questions which could not be

answered by the Standard VI girls on the syllabuses which they had covered. But we decided to take the risk that the correlation between the results of (a) our preliminary and (b) our final tests might be so low that no conclusive statistical results would emerge. As a matter of fact, our results were so clear that probably even a rougher division would have sufficed. All the relevant statistics will be shown subsequently in one table. The answers to the questions were marked simply "right" or "wrong," the correct date carried a mark, the correct century carried a mark, and any answer to section "C" of the question which really did define the time to some extent. For instance, the section "C" of the question about Magna Carta would be regarded as satisfactory if the child wrote "In the reign of King John." Section "C" of the question on the Great Fire would be regarded as answered if the child wrote "After the Plague," and so on. The highest mark for the 30 dates was 15, the average was between 5 and 6, and there were four "o's." The highest mark for the centuries was 16, the average was 6, and there were seven "o's." The highest mark for the section "C" answers which gave other chronological determinants was 22, the average was over 5, and there were six "o's." The average aggregate mark was over 21 (out of 90), the highest was 40, and there was one 1 and two 2's. We have certainly succeeded in spreading out our classes well, and the marks run steadily down. All the testing and marking was done by the head mistress, who was an experienced experimenter; the teaching was done by a good teacher, who, of course, taught both groups.

(3) THE TEACHING OF THE TWO GROUPS, THEIR STUDY PERIODS AND THE FINAL TESTS.

We have divided the children, what and how shall we teach them? It was felt that we should be on safer ground if we chose lessons on historical subjects on which no information had previously been given them than if we took subjects on which the children had had some previous teaching. So we chose subjects like the Roman Wall (only one was dealt with), the White Ship, the Black Death, Wyatt's Rebellion, the Capture of Gibraltar, and the Death of General Gordon, in all twelve lessons. The lessons were given by the teacher of Standard VI, and were entirely oral. Before the course began, all text-books, reading-books, note-books, charts, and other sources of historical information were removed from the rooms used by the children doing this work, and stored in the stock-room, where the

girls could have no possible access to them, and during the time these lessons were in progress no other historical teaching or learning was given to or done by the children who were working the experiment, which, of course, was quite *unwissentlich*. New note-books were supplied to the girls, and very brief notes were dictated by the teacher toward the end of each lesson, which were the same to each group, except that the lessons and the notes of Group A contained the date of the event and those of Group B the century and the part of the century in which the event took place. A date chart and a century chart were also made—the date chart contained only the date of the event, the century chart contained the centuries with the event placed in the middle or at each end in accordance with its happening. Each lesson lasted thirty minutes, including the time spent in taking down the notes. The lessons were given to Group A the first week and to Group B the second week, and two lessons to each group being given each week. All the lessons were given at good pedagogical times, but not always in the mornings. At the end of each lesson, note-books and charts were taken away, and were inaccessible to the girls until the following lesson. There is one matter of considerable importance which I omitted to make clear to the teacher in this first experiment. Of course, a child knowing the date, if it understands the full meaning of the date, knows also the century, and I was particularly anxious that this should not be pointed out or explained, but I did not succeed in preventing it in this case, though I did in subsequent experiments. Let no one think that a child necessarily knows the century when it knows the date ; it certainly does not, as indeed we shall abundantly find. After the final lesson on February 4th, 1927, no further historical teaching or learning of any kind was done until Wednesday, February 23rd, when the first of three study periods of half-an-hour began, and the children worked with their notes and charts before them of the history that had been taught during the experiment ; a second occurred on Thursday, and a third on Friday. Groups A and B took their study periods from 10 to 10-30 a.m. and 10-30 to 11 a.m., Group A having two of the earlier times and Group B one of them.

There is good evidence that Group B taking the later morning time on two out of the three occasions had a time of superior mental adaptation, but most teachers believe the contrary. The study periods were supervised by the teacher of the first or Standard VII class, and there is little doubt that the children worked up to capacity. A final test was taken by the head mistress on Wednesday, 2nd of March, 1927, of exactly the same type as those used in the

preliminary tests, but now dealing only with the chronology taught in the special lessons, and this time there were twelve questions, each with sections "A," "B," and "C," instead of ten.

No special point was made either of the date or the century, the lessons were lessons *in history*, in which the time of the event found a place, and did not do more than find a place; but, as I have said, the notes for Group A and B respectively included the date and the century, and doubtless, the questions set in the preliminary tests induced the girls to give more than usual attention to these parts of their notes. I cite here the actual words of the notes of one lesson by Beatrice G., one of the "century" group; the map was, of course, in use during the lessons.

DEATH OF GENERAL GORDON—END OF THE NINETEENTH CENTURY.

THE SUDAN.—The Land of the Blacks in Africa.

KHARTUM.—Capital of the Sudan in the Upper Nile Region.

ORDER IN SUDAN.—Kept by English and Egyptian Soldiers. Revolt in Egypt against foreigners spread to the Sudan.

REVOLT IN SUDAN.—Dervishes led by the Mahdi.

GORDON.—Sent to withdraw troops from Sudan.

EVENTS 1.—Gordon hemmed in at Khartum.

2.—Telegraph wires cut.

3.—Relief party too late.

4.—Gordon killed after siege of nearly a year.

The notes of Shiela F., one of the "date" group, were precisely the same, except that in the place of the words "end of nineteenth century," occurred the date, 1885.

(4) RESULTS.

We started the experiment with 72 girls, and kept a register throughout of their attendances during the Preliminary Tests, the Teaching and Study periods, and the Final Test. This was useful, because it enabled us to see the absences at a glance, and prevented us from "pairing" children whom it was fairer to leave out. It did not, however, preclude us from entering children who had not made more than the usual amount of occasional absences. One of the best girls could not be paired, and another of the best girls was away so often that it was useless to put her in either group, and there were one or two others in a similar predicament. We were able to tabulate the marks for 64 girls on their aggregate chronological mark in the preliminary tests.

TABLE I.

SHOWING THE INDIVIDUAL MARKS FOR THE PRELIMINARY TESTS,
AND THE FINAL TEST OF THE GIRLS IN GROUP A AND IN GROUP B.

(Only correlated pairs are included in the averages.)

GROUP A.—THE "DATE" GROUP.

| Name (Initials only). | Marks for Three Preliminary Tests. | | | | Marks for Final Test. | | | |
|--------------------------|---------------------------------------|------------|--------------------|---------|--------------------------|------------|--------------------|---------|
| | Dates. | Centuries. | Associated Events. | Totals. | Dates. | Centuries. | Associated Events. | Totals. |
| E. W. | 10 | 16 | 14 | 40 | 11 | 11 | 8 | 30 |
| D. R. | 10 | 16 | 11 | 37 | 12 | 12 | 6 | 30 |
| G. W. | 10 | 6 | 18 | 34 | <i>a</i> | <i>a</i> | <i>a</i> | — |
| G. T. | 15 | 9 | 9 | 33 | <i>a</i> | <i>a</i> | <i>a</i> | — |
| G. D. | 8 | 12 | 13 | 33 | 10 | 12 | 6 | 28 |
| L. P. | 8 | 11 | 9 | 28 | 11 | 11 | 7 | 29 |
| S. F. | 5 | 11 | 12 | 28 | 9 | 12 | 9 | 30 |
| M. T. | 10 | 13 | 4 | 27 | 12 | 12 | 0 | 24 |
| W. M. | 10 | 12 | 3 | 25 | 3 | 4 | 2 | 9 |
| W. C. | 6 | 6 | 8 | 20 | 7 | 9 | 0 | 16 |
| L. H. | 4 | 7 | 8 | 19 | 5 | 5 | 4 | 14 |
| F. W. | 9 | 7 | 3 | 19 | 12 | 12 | 2 | 26 |
| C. T. | 9 | 2 | 7 | 18 | 11 | 0 | 3 | 14 |
| A. D. | 6 | 7 | 4 | 17 | 11 | 12 | 3 | 26 |
| R. A. | 4 | 5 | 7 | 16 | 8 | 9 | 5 | 22 |
| M. M. | 4 | 6 | 5 | 15 | 9 | 9 | 0 | 18 |
| D. B. | 4 | 4 | 7 | 15 | 4 | 6 | 4 | 14 |
| M. W. | 8 | 2 | 4 | 14 | <i>a</i> | <i>a</i> | <i>a</i> | — |
| V. T. | 5 | 9 | 0 | 14 | 4 | 7 | 3 | 14 |
| G. E. | 3 | 10 | 0 | 13 | 4 | 4 | 0 | 8 |
| G. M. | 3 | 3 | 6 | 12 | <i>a</i> | <i>a</i> | <i>a</i> | — |
| D. B. | 3 | 5 | 2 | 10 | 10 | 12 | 1 | 23 |
| I. S. | 5 | 2 | 2 | 9 | 4 | 6 | 1 | 11 |
| S. K. | 0 | 0 | 8 | 8 | 5 | 0 | 6 | 11 |
| L. T. | 3 | 3 | 1 | 7 | 5 | 9 | 1 | 15 |
| K. B. | 1 | 3 | 2 | 6 | <i>a</i> | <i>a</i> | <i>a</i> | — |
| M. M. | 1 | 3 | 1 | 5 | <i>a</i> | <i>a</i> | <i>a</i> | — |
| I. E. | 2 | 2 | 1 | 5 | 5 | 7 | 4 | 16 |
| J. D. | 1 | 0 | 3 | 4 | 2 | 2 | 2 | 6 |
| V. E. | 1 | 0 | 3 | 4 | 7 | 10 | 0 | 17 |
| B. P. | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 4 |
| G. S. | 0 | 0 | 1 | 1 | 4 | 6 | 0 | 10 |
| Averages | 5.3 | 6.0 | 5.5 | 16.8 | 7.1 | 7.6 | 3.2 | 17.9 |

DATES VERSUS CENTURIES IN TEACHING CHRONOLOGY

GROUP B.—THE “CENTURY” GROUP.

| Name (Initials only). | Marks for Three Preliminary Tests. | | | | Marks for Final Test. | | | |
|--------------------------|---------------------------------------|------------|--------------------|---------|--------------------------|------------|--------------------|---------|
| | Dates. | Centuries. | Associated Events. | Totals. | Dates. | Centuries. | Associated Events. | Totals. |
| B. G. | 14 | 15 | 10 | 39 | 0 | 12 | 7 | 19 |
| K. W. | 8 | 15 | 13 | 36 | 0 | 7 | 5 | 12 |
| A. F. | 9 | 4 | 22 | 35 | 0 | 11 | 7 | 18 |
| J. J. | 10 | 15 | 10 | 35 | 1 | 10 | 6 | 17 |
| F. A. | 11 | 16 | 7 | 34 | 0 | 11 | 2 | 13 |
| M. S. | 12 | 13 | 4 | 29 | 0 | 7 | 4 | 11 |
| M. G. | 7 | 12 | 8 | 27 | 0 | 10 | 7 | 17 |
| D. P. | 6 | 9 | 11 | 26 | 0 | 11 | 8 | 19 |
| D. D. | 7 | 10 | 4 | 21 | 0 | 8 | 5 | 13 |
| E. B. | 10 | 3 | 8 | 21 | 0 | 2 | 3 | 5 |
| M. B. | 5 | 7 | 7 | 19 | 0 | 5 | 10 | 15 |
| D. C. | 7 | 3 | 8 | 18 | 0 | 8 | 7 | 15 |
| A. R. | 6 | 6 | 5 | 17 | 0 | 12 | 0 | 12 |
| E. M. | 12 | 4 | 1 | 17 | 0 | 10 | 1 | 11 |
| K. R. | 9 | 4 | 3 | 16 | 0 | 9 | 7 | 16 |
| M. O. | 5 | 6 | 4 | 15 | a | a | a | — |
| D. E. | 5 | 9 | 0 | 14 | 0 | 8 | 3 | 11 |
| K. C. | 2 | 7 | 3 | 12 | 0 | 0 | 6 | 6 |
| F. B. | 5 | 6 | 0 | 11 | 1 | 7 | 0 | 8 |
| W. W. | 4 | 3 | 4 | 11 | 0 | 6 | 2 | 8 |
| M. M. | 6 | 3 | 1 | 10 | 0 | 7 | 0 | 7 |
| E. S. | 3 | 3 | 2 | 8 | 0 | 3 | 2 | 5 |
| M. R. | 3 | 5 | 0 | 8 | 0 | 2 | 0 | 2 |
| E. A. | 3 | 4 | 1 | 8 | 0 | 4 | 0 | 4 |
| S. S. | 1 | 0 | 6 | 7 | 0 | 8 | 0 | 8 |
| K. P. | 2 | 3 | 2 | 7 | 0 | 7 | 0 | 7 |
| L. W. | 2 | 3 | 0 | 5 | 0 | 8 | 1 | 9 |
| L. W. | 0 | 1 | 4 | 5 | 0 | 8 | 3 | 11 |
| F. T. | 1 | 2 | 2 | 5 | 4 | 5 | 0 | 9 |
| W. B. | 2 | 1 | 1 | 4 | 0 | 1 | 2 | 3 |
| E. M. | 0 | 0 | 3 | 3 | 0 | 3 | 1 | 4 |
| M. P. | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 1 |
| Averages | 5.6 | 6.0 | 4.8 | 16.4 | 0.2 | 6.7 | 3.2 | 10.1 |

The "date" group has in the aggregate won an overwhelming victory ; it is apparently easier to remember a definite date than it is a century, for the date group scores 7.1 in the Final Test against 6.7 for the centuries by the "century" group. They have even done better in the "centuries," though they had not specifically learnt them ; but it would not be safe statistically to assert that ; since the differences between the averages is .9 and its probable error is .6, it would be better to say that they have done as well. In the other chronological determinants, which we have called in the table "associated events," the two groups in the final test have achieved exactly the same average mark. It is true that Group A did better in the Preliminary Test in this respect than Group B, but the difference is not a valid one (difference .7, p.e. .4). It does not appear that either "dates" or "centuries" are of preferential importance to the children in this respect. Of course the girls of Group B did not know the dates of the events of the special series of lessons ; they had not been taught. The dates were not in their notes, and not on their charts. Nevertheless, there were right answers in two or three cases, and these cases were investigated. Joan J. saw the date of the event at the bottom of a picture which she looked at in the Public Library ; Florence B. caught sight of the date chart used by Group A as it was carried out of the room, and Florence T., who obtained four marks for dates correctly given, got a book from the Public Library and learnt them at home.

But it may be that the date, though learnt better, was the more difficult, and it may have been acquired at a greater mental cost. If that is the case, the history, apart from its chronological aspect, would not have been learnt so well (the time allowed was strictly limited be it remembered). That possibility will be considered specifically in the experiment next to be described. Meanwhile, I will show in a more summarized, but less conclusive form, the results of the present experiment.

TABLE II.—SHOWING SECTION BY SECTION, THE MARKS FOR THE PRELIMINARY AND FINAL TESTS OF GROUPS A AND B RESPECTIVELY (INCLUDING ALL CASES, WHETHER CORRELATED OR NOT).

GROUP A.—THE “DATE” GROUP.

| Marks for Three Preliminary Tests. | No. of cases | Average marks First Preliminary Test. | | | Average marks Second Preliminary Test. | | | Average marks Third Preliminary Test. | | | Aver. marks for Three Prely. Tests. | Average marks Final Tests. | | | Aver. marks Final Tests |
|--|--------------------|---|-----------------|---------|--|-----------------|---------|---|-----------------|---------|--|-------------------------------|-----------------|---------|----------------------------------|
| | | Dates. | Cent- uries. | Events. | Dates. | Cent- uries. | Events. | Dates. | Cent- uries. | Events. | | Dates. | Cent- uries. | Events. | |
| Over | 30 | 3.6 | 2.8 | 4.3 | 4.8 | 5.0 | 3.8 | 2.3 | 4.0 | 5.0 | 35.4 | 11.0 | 11.6 | 6.6 | 29.3 |
| " | 20 | 2.8 | 2.8 | 1.5 | 4.0 | 4.8 | 2.3 | 1.5 | 4.3 | 3.3 | 27.0 | 8.8 | 9.8 | 4.5 | 23.0 |
| " | 15 | 1.3 | 0.7 | 2.0 | 3.5 | 2.6 | 1.5 | 1.5 | 2.3 | 2.6 | 18.2 | 9.0 | 7.8 | 2.4 | 19.6 |
| " | 10 | 1.1 | 1.0 | 1.5 | 2.3 | 1.8 | 0.7 | 1.5 | 2.5 | 1.5 | 14.0 | 5.3 | 6.5 | 1.8 | 13.5 |
| " | 5 | 0.8 | 0.6 | 1.2 | 1.0 | 1.0 | 0.6 | 0.6 | 1.0 | 1.2 | 8.0 | 6.0 | 6.8 | 2.2 | 15.0 |
| 5 and below | 5 | 0.5 | 0.5 | 0.3 | 0.2 | 0.3 | 0.5 | 0.3 | 0.2 | 0.7 | 3.5 | 3.6 | 5.2 | 1.4 | 10.2 |

GROUP B.—THE “CENTURY” GROUP.

| Marks for Three Preliminary Tests. | No. of cases. | Average marks First Preliminary Test. | | | Average marks Second Preliminary Test. | | | Average marks Third Preliminary Test. | | | Aver. marks for Three Prely. Tests. | Average marks Final Test. | | | Aver. marks Final Test. |
|--|---------------------|---|-----------------|---------|--|-----------------|---------|---|-----------------|---------|--|------------------------------|-----------------|---------|----------------------------------|
| | | Dates. | Cent- uries. | Events. | Dates. | Cent- uries. | Events. | Dates. | Cent- uries. | Events. | | Dates. | Cent- uries. | Events. | |
| Over | 30 | 3.6 | 3.4 | 3.2 | 5.0 | 5.2 | 4.6 | 1.8 | 4.4 | 4.6 | 35.8 | 0.2 | 10.2 | 5.4 | 15.8 |
| " | 20 | 1.8 | 1.6 | 2.2 | 3.6 | 3.0 | 2.4 | 3.0 | 4.8 | 2.4 | 24.8 | 0.0 | 7.6 | 5.4 | 13.0 |
| " | 15 | 1.6 | 0.6 | 1.8 | 3.8 | 1.2 | 1.4 | 2.4 | 3.0 | 1.6 | 17.4 | 0.0 | 8.8 | 5.0 | 13.8 |
| " | 10 | 0.6 | 1.2 | 0.4 | 2.4 | 2.2 | 0.8 | 1.2 | 2.8 | 1.8 | 12.6 | 0.3 | 5.3 | 2.3 | 8.3 |
| " | 5 | 1.6 | 0.8 | 1.1 | 1.3 | 1.5 | 0.5 | 0.0 | 0.6 | 0.3 | 8.0 | 0.0 | 5.1 | 0.4 | 5.5 |
| 5 and below | 5 | 0.8 | 0.5 | 0.6 | 0.2 | 0.5 | 0.7 | 0.0 | 0.2 | 0.3 | 4.0 | 0.7 | 4.3 | 1.4 | 6.1 |

An Enquiry as to the Reasons for the Choice of Occupations among Secondary School Pupils.

II.—ENQUIRY IN A GIRLS' SCHOOL.

BY F. M. RITCHIE (Mrs. Austin).

A REPORT of the first part of this enquiry has already been published.* In that report the motives given by 276 secondary school boys as influencing their choice of vocation were discussed. The conclusions reached demonstrated the great necessity for the extension of information and advice.

A further investigation, reported here, shows that the need for guidance, advice, and information, is equally urgent in the case of secondary school girls.†

In this article the results obtained from 292 girls in a girls' secondary school in the Midlands are considered. The school is attended by children from the same kinds of homes as those in the boys' school already examined.

The plan of procedure was the same as that already adopted for the boys.‡ By the courtesy of the head mistress the instructions were given in each class in the school at the same time, and time was allowed for the pupils to write their papers.

It should be noticed particularly that the reports were anonymous. This anonymity no doubt gave the girls a sense of security which, in part at least, probably accounts for their extreme frankness. Parents, teachers, and other adults are referred to most candidly, sometimes appreciatively, sometimes disapprovingly.

Adult influence is of course only natural and sometimes the papers show it to be excellent, as in the case of "Aurora Borealis," aged 17½, who intends to be a science teacher and writes :

"I have been slightly influenced by my parents and sisters, but why I am choosing this profession is because I am interested in the subjects. I have always enjoyed the sciences, I think partly because my father is interested in them and so can converse with me, but also because I am of a practical nature."

* "An Enquiry as to Reasons for the Choice of Occupation among Secondary School Pupils," by C. W. Valentine and F. M. Ritchie. (*Forum of Education*. Vol. V, No. 2. June, 1927.) Reprinted (with some omissions) in the *Journal of the National Institute of Industrial Psychology*. Vol. IV, No. 4. October, 1928.

† A useful pamphlet called "Memorandum on Openings and Trainings for Women" is published by the London and National Society for Women's Service, Women's Service House, 35/37, Marsham Street, Westminster, S.W.1.

‡ The plan is due to Professor Valentine. See previous article.

Even if the adult influence here is in reality the chief one it seems to be in line with the girl's own interests and nature.

One sees, too, for "Regina Casinello" (aged 17 $\frac{1}{3}$) a chance of success in the work taken up—that of teaching. She writes :

"I made this decision partly because it was essential, as *father's wish is law*, and although he asked me what I wished to do he would not have been satisfied with anything else."

Clear-eyed "Regina" is also philosophical, and looking on the bright side proceeds to enumerate the advantages of the life of a teacher, and ends thus :

"Though at first I did not wish to teach very much, I have now decided that I am quite pleased with this arrangement, and feel that my elders are wiser than me, and are very well capable of choosing for me. I hope this does not sound like a reconciliation to one's fate, for I am really glad that I have a chance of teaching."

There seems, however, to be less chance of success and contentment in cases like the following, which are only too common :

"*Disappointed.*" Age 17 years. *Secondary School Teacher of Latin.*

"I decided this about two years ago and was influenced very much by my parents, although I would much rather be a hospital nurse, and after the training I would like to have gone out to a hospital in India. However, mother was a teacher and wants me to be one, for she considers that the work nurses have to do is too hard. For this very reason I think those to whom the work appeals should take it up . . . Although teachers are indispensable, I think nurses are even more so."

Similarly where reasons like the following are the main influence :

"*Irene.*" Age 13 years 10 months. *Teacher.*

"My grandma was a teacher and would like me also to become one . . . My father would also like me to be a teacher, as grandma is his mother."

The impossibility of taking up the work desired sometimes leads to indecision even up to the age of seventeen, as in the case of "5XX," who writes :

"I should like to be an *actress* though, of course, I should never be allowed to be one. The life is too hard, and the prospects not happy enough. More than this, I should like to be a *singer*, as I am very fond of music and singing. I am afraid these ideas sound rather high flown, but to be a typist, teacher, nurse, or any of the ordinary professions does not appeal to me in the least."

The struggle between opposing adult influences comes out in the following :

“ Mother and an aunt influence me in being a private secretary, or a clerk, and dad would like me to be a teacher.”

“ My mother often tells me that nursing is very hard work, but daddy would like me to take up this occupation because he said when he was a soldier he saw so many fellow-soldiers who needed nursing.”

Usually, however, in spite of the fact that “ Nursing is one of the few professions in which it is possible to obtain a free training ”* it seems to be unpopular with parents. Two quotations will illustrate this :

(a) “ *Esperance.*” Age 16 years.

“ I have always wanted to be a hospital nurse and to work until in time I might be matron. If I were a nurse I should feel that I was doing good for someone. There seems to be something different in nursing from in any other profession. It appeals to me as nothing else does, but I am not encouraged in any way by my people. They do not think it suitable, although I am sure I am capable for the work.”

(b) “ *Billy.*” Age 17 years.

“ This idea has met with much argument. Everybody who hears of my wish says : ‘ It is a very good life but such hard work.’ ”

More and more occupations are becoming recognized as open to girls and only 7 out of the total 292 girls express a wish that they were boys, or that they could take up a career which is entirely or almost entirely confined to men.

The army and the sea call a few, for example :

(a) “ *A Guide.*” Age 15 years.

“ During the Great War I always declared I would be a soldier when I was old enough, like my father, so that I could fight the enemy. As I grew older I realized that I could never be a soldier, therefore I should like to be a nurse.”

(b) “ *Sybil.*” Age 16 years, would like to be a secretary on a Cunard or White Star liner. She used to live near dockyards, and writes :

“ I spent nearly all my holidays down watching the men work, and I became fond of ships and the sea. If I were a boy I would be a sailor, but the next best thing is a post of some description on a liner.”

* See Memorandum mentioned in footnote† on page 42.

(c) "*Elizabeth.*" Age 13½ years.

"My uncle is a sailor and he has some lovely tales of adventures and scenery and animals, of lands where it is never cold and some where it is never hot. I do not think anything could be better than a life to do with travelling, but I would like to be a man so that I could be a real sailor. I think it is the best thing anyone could ever do."

However, as she cannot be an ordinary sailor she means to try to be a stewardess on board ship.

As a final example of the desire to be like a boy I quote "*Kim,*" age 16, who would like to be a lady farmer because she loves an outdoor life and to be with animals. She concludes :

"I should be able to wear breeches and be as nearly like a boy as possible."

Being a girl she intends to be a nurse and wishes she had been born about twenty years earlier so that she could have gone as a Red Cross Nurse during the war.

The same number of girls as express a desire to be like boys or to pursue a boy's occupation, i.e., 7 out of 292, suggest that they recognize, or desire to provide for, the possibility of marriage. Examples are :

(a) "*Constance.*" Age 16 years.

"I should like to stop at home and have domestic training. I feel that I may need this when I am older. It would be dreadful if, when married, I did not know how to run a house, and how to cook. After having domestic training I should like to go to college and learn shorthand and typing, book-keeping and office routine. I should not always like to stop at home as it is very nice to feel independent. In learning shorthand, typing, etc., it does not mean that I should always like to be in an office, but it is very useful to know all these things."

And (b) "*5 G.B.,*" age 16 years, who intends to be an elementary teacher, and looking very far ahead writes :

"If a girl becomes a teacher, but marries, she can't continue to teach, I know, but if ever her husband should die, she can become a teacher again and be dependent upon herself."

The possibility of not marrying is also considered by some. "*Nippy,*" age 14 years, writes : "I should like to obtain a position such that I may still keep it if I wish to remain single" ; and "*Fay,*" age 14½ years, choosing the Civil Service, writes : "If you remain unmarried you are pensioned off at a certain age."

PART I.
REASONS GIVEN SPONTANEOUSLY.

A great variety of reasons were given spontaneously. In some cases it is obvious that sound motives were influencing the girls in their choice of profession, but the proportion of these is small, as will be seen later. As with the boys' papers the main interest for the investigator lies in individual statements, but a mark has been assigned to each girl's paper, and serves as a rough indication of the extent to which fairly sound reasons are given as determining the choice. Care was taken to mark only for relevance and soundness of the reasons given, and not for literary ability.

The results from the Sixth Form (average age 17 years 9 months) and from the Fifth Forms (average age 15 years 4 months) are, as before, our greatest concern, for fewer girls leave school from the lower forms of average age less than 14. Also, the choice of occupation in the lower forms is less mature and permanent and the reasons possibly less reliable, though it should be noted that in the two top forms many of the papers show that the decision had been made some years before.*

TABLE I.
QUALITY OF SPONTANEOUS REASONS.

| | <i>Form VI.</i> | <i>Forms V.</i> |
|--|-----------------------|-----------------------|
| Number of Girls | 18 | 87 |
| Average Age | 17 $\frac{3}{4}$ yrs. | 15 $\frac{1}{3}$ yrs. |
| | <i>Form VI.</i> | <i>Forms V.</i> |
| Number of girls marked Excellent | 4 | 9 |
| " " " Good | 0 | 6 |
| " " " Moderate | 13 | 42 |
| " " " Poor | 0 | 16 |
| " " " Very Poor | 1 | 14 |

Only the excellent or good reasons can be regarded as satisfactory†, so that in the Sixth Form more than two-thirds of the 18 girls‡ seem to be choosing their professions on inadequate grounds, while in the Fifth Forms about five-sixths of the choices of 87 girls,§ judged by their own statements, are unsatisfactory.

* Of the 38 girls in Forms V and VI who give a definite date of decision, 31 had decided before the age of 14.

† See examples given in following pages.

‡ The corresponding figure in the boys' school was 1/3 of 29 boys, the assessor being the same.

§ The corresponding figure for the boys was 2/3 of 58.

The statements may sometimes be incomplete, but the papers do not suggest carelessness or inability. Also the girls are of picked intelligence, and in the top forms of a large secondary school in which the standard of work and efficiency is recognized to be very high.

On the other hand many papers indicate vague, some even wrong, ideas about the most common vocations. Examples of these are given in the next section. It is not too much to assume that much of the vagueness, and many of the inaccuracies, are due to the want of exact information.

Even if we regard the "moderates" as indicating sound reasons we find 24 girls between the ages of 15 and 19 years giving very inadequate reasons for their choice, and the same is true of 31 girls between the ages of 14 and 19. The standard of judgment is shown by the following examples taken from the sixth and fifth forms.

Excellent. "Ave Atque Vale." Age 18 years 5 months. Secondary School Teacher.

"I decided . . . to teach French when I was about 16, and gained a distinction in that subject. Another reason for choosing French in preference to, say English and History, was that the latter school at a university is generally overcrowded. Unfortunately, since I decided, the French schools have become crowded also! However, since deciding on French and specializing in it, I have become very much interested in it as a subject and also in the teaching of it, as I have done a little of it at school during the past term and find it very fascinating. My first reasons for choosing teaching were, however, of rather a lower order. It was about the only way I could see of getting to college, not being brainy or hard-working enough to get scholarships. Secondly, the idea of long holidays and a good salary, which meant to me travel and a chance of going to good plays, having good books, and hearing good music, was very attractive. Lastly, I am fond of children and being of an assertive disposition, I hoped I would be able to keep order and therefore be able to teach. Anyway, my pupils have liked my lessons."

Moderate. "Isobel." Age 15 years 2 months. Comptometer Operator.

"A person who works on a contometer (*sic*) is generally regarded as more advanced than a shorthand typist. A contomitess has better wages than a shorthand typist. . . . Not many people learn to use a contometer and so if they become efficient and can work with speed they are very much more likely to get a situation than is a shorthand typist, for this

reason. There is only one contometer school in B——, but there are a great many shorthand and typing schools, consequently there are more typists than there are contomitesses. A girl who mixes with other people a great deal has to be fairly level tempered, good natured, and not touchy. For a girl who cannot take teasing and 'leg-pulling' without getting angry the life in an office would not be suitable. I think to a certain extent I can stand being teased and having my leg pulled for the simple reason that I get nothing but that from my three brothers at home. I have been attending a shorthand and typewriting class and I dislike it. And so a contometer has appealed to me because it is work with the fingers. You may say that typing is work with the fingers too but it is not so interesting as adding long columns on a contometer."

Poor. "Olive." Age 15 years 3 months. Office Work.

"I would like to be in some kind of office where very little arithmetic is needed, for I am not particularly good at working out long sums in arithmetic, not because I cannot do them, but because I am rather careless. There is one particular office into which I should like to go because I know several girls who work there and I think it is much better if you know someone who is already there."

We proceed now to consider the motives in greater detail.

A.—REASONS BASED ON MISTAKEN IDEAS IMPLYING LACK OF KNOWLEDGE.

Mistaken ideas as to the kind of work and the kind of capacity or capacities involved in a particular occupation are given as a partial basis for choice by $6\frac{1}{2}$ per cent* of the girls.

Only one case occurs in the sixth form, otherwise they are as frequent in the higher forms as in the lower ones.

Well-informed advice would probably dispel some of the ideas involved in these statements of would-be dispensers :

(a) "*Joan*," age $14\frac{1}{2}$ years ; (b) "*Cordelia*," age $15\frac{1}{2}$ years ; (c) "*Barbara*," age $14\frac{1}{2}$ years :

(a) "If one is miles out in the country and an accident happens it is very useful to know how to cope with it."

(b) "I do not think that I should get tired of it because there is something different to do all the time."

(c) "I like doing experiments and finding out new things."

* The corresponding figure for the boys was 9 per cent.

And these ideas about the work of a private secretary given by (a) "*Matilda*," age 13 years ; and (b) "*Mary Rose*," age 15 years :

(a) "You usually travel about with the person you work for. The hours are not very long."

(b) "I should probably have to answer my employer's correspondence in the morning and have all the rest of the day to myself . . . the wages would be good. I should be able to have everything I wanted."

Even about a profession such as that of teaching, with which all the girls are in close contact, vague or inaccurate ideas are frequent, for example :

(a) "My parents agreed that as I had bad headaches occasionally I needed a profession where holidays were frequent."

(b) "At a secondary school the girls are more or less quicker and sharper at lessons than those that attend an elementary school. Therefore it does not need much patience to teach them."

(c) "While a teacher I should have to travel about to different schools."

(d) "A school teacher has not many worries and plenty of freedom."

(e) "A schoolmistress is sure to keep young through her constant association with the young, with their games and pranks."

(f) "Music teaching is really a pleasure to those who love music and I do."

As a final example these ideas expressed by "*Janet*," aged 14, show a mistaken impression as to the qualities necessary in a fashion designer :

"I feel specially fitted to do this kind of work because I have a good figure and am quite good looking, and am that kind of person."

B.—SUPERFICIAL REASONS.

(I) *The Ease of Getting a Job.*

This apparently does not weigh as heavily with the girls as with the boys, or at any rate they do not seem to be as conscious of it as an influence. Only 3 per cent* of the girls spontaneously

* Compared with 18 per cent. of the boys.

mention this as one of the main reasons for their choice, and slightly over 2 per cent. say they have been offered a job.*

32 per cent. of the girls give teaching as their choice ;

30 per cent. give office work ;

8 per cent. give nurses' work.

The remainder spread themselves over about 40 other occupations. The only vocations in which " offer of a job " is mentioned are office-work, gardening, and shop-keeping.

In an occupation like teaching obviously a job could rarely be offered, especially at this early stage.

It can, however, hardly be concluded that these girls are less subject than the boys to the temptation of taking an available job, even though it is unsuitable or a " blind-alley." In reality there are fewer occupations open for girls and they are less free than the boys from such a factor as the influence of the frequency or scarcity of openings, and there is danger of this influence being a powerful determinant whatever the peculiar capacities and tastes of the individuals may be.

" Ease of getting a job " may quite well be a powerful motive underneath a girl's choice of, say, the teaching profession, without consciousness of it as such on the part of the girl.

(2) *Trivial Reasons or Side Issues.*

Under this heading are included cases of drifting ; of choosing a career because there seemed " nothing better to do "† or because of attractive incidental advantages, advantages which are undoubtedly important in many cases but hardly provide sufficient reason for such an important decision.

An example of drifting is :

" *En Avant.*" Age 18 years 5 months.

" I did not choose my career at any particular age. I obtained my matriculation at the age of 16, went into the sixth form, and realized that I was drifting towards the university. As my favourite subject is Latin there seems nothing to do except teach and I am now quite reconciled to my fate."

Examples which show the influence of a desire to come into contact with pleasant and educated people, or to become better educated or more cultured are :

* Compared with nearly 11 per cent. of the boys.

† Scarcity of openings may lead to this.

(a) "Sybil." Age 14 years 8 months. *Librarian.*

"The work is not dull like office work and one often meets pleasant people . . . persons I have known who held positions in libraries. These were some of the pleasantest people I have ever met. Their work had trained them to be tactful, well-read, courteous, friendly, and broad-minded. I should like to be like them, too, and that has influenced me as much as anything in my choice of a profession."

(b) "Girly." Age 15 years. *Dispenser.*

"You get into the company of clever girls because you cannot be a dispenser until you have passed the matriculation. I should like it because I should come into contact with educated children, boys and girls, whose friendship I am sure I should welcome."

(c) "5 G.B." Age 16 years. *Teacher.*

"A teacher is constantly improving her reasoning powers and becoming better educated every year. It is very helpful to be able to talk upon all general matters not just be tied down to a few, and be totally ignorant of others."

(d) "Black Sheep." Age 15 years. *Clerk.*

"Adding figures develops and keeps the brain alive and writing business letters keeps it concise and helps one to keep to the point."

The following examples illustrate the attraction of certain incidental advantages, imagined or real :

(a) "Leonora." Age 13 years 2 months. *Secondary or High School Teacher.*

" . . . as they (teachers) seem to have such a good time. If they are not teaching in the form rooms, they are marking books in the staff room where there is a large fire and where they can laugh and talk with their fellow-mistresses."

(b) "Rufty-Tufty." Age 15 years. *Clerk.*

"I think it so jolly to be in a large office with many other people of both sexes."

(c) "Valerie." Age 13 years 9 months. *Chemist's Dispenser.*

"I like puzzling out Latin words and I think many of the bottles that perhaps I should have to label would contain mixtures with Latin names."

(d) "Mavis." Age 13 years. *Private Secretary or Clerk.*

"I have known several people in offices and as secretaries and they seem to have a good time."

(e) "*Hilda.*" Age 15 years 4 months. *Doctor.*

"Medicine and other remedies could be procured at a much smaller cost."

(f) "*Silvermoon.*" Age 16 years. *Railway Clerk.*

"One receives a good wage and free passes to everywhere one pleases."

The number of these trivial reasons is greater for the girls than for the boys, i.e., 14 per cent., compared with 6 per cent. The percentage is unexpectedly high especially among the senior girls. Seventeen cases occur among the 105 girls in the sixth and fifth forms (i.e., 16 per cent.), where all the girls are over 14 years of age, while 23 cases occur among the 187 girls in the lower forms (i.e., 12 per cent.).

(3) *The "Respectability" Motive or Antagonism to Manual Work.*

Only 12 cases (i.e., 4 per cent.)* come under this heading. Most of these 12 girls mention respectability or "refinement," particularly the kind they believe to be associated with the teaching profession. This is shown in the following by (a) "*Kipper,*" age 14 years.

(b) "*A Schoolgirl Camper,*" age 16½ years; and (c) "*Babs,*" age 13 years:

(a) "Teachers mix up with a nice class of people. Persons influencing are two mistresses from the secondary and one from the Council school. All three are very ladylike and refined, and I should like to be like them."

(b) "The atmosphere of school and university seems to me to be lacking in many other professions and allows one to move in higher social circles than, for instance, office work."

(c) "A teacher is brought into contact with more refined people than she is likely to do if, say, she goes into an office."

Several times the parents are quoted as considering teaching "a superior profession," and sometimes as desiring the girls to have the best possible chances. (a) "*Buttercup,*" age 13 years, who hopes to go into the Civil Service; and (b) "*Henrietta,*" age 13 years, who would like to be a cook, write thus:

(a) "It was my father and mother who influenced me and they did so because they wanted to give me a good and fair chance, and so that anyone could not look down upon me, it might even be the friends whom I went to school with, and also because I liked the idea of such an opportunity myself."

* Compared with 10 per cent. of the boys; 17 boys gave cleanliness as a motive and only one girl did so. This partly accounts for the difference.

(b) "Father does not want me to be a servant of any kind, so perhaps I shall not be a cook, but if I am not I do not think that I shall put all my energy into my work."

The respectability motive taking the form of a desire for good company and good clothes is shown by some in choosing office work, for example :

"I think I should get on well at such a place and mix up with nice girls." "You mix with better class people and you get more money and are able to dress better."

Adding the number of cases of these three types of motives : (1) The ease of getting a job ; (2) the trivial or irrelevant motive ; and (3) the anti-manual, respectability or cleanliness motive, we find the total is 21 per cent* of the whole number.

This table shows the relative numbers for girls and boys :

| | <i>Motive.</i> | <i>Girls.</i> | <i>Boys.</i> |
|---|-----------------------------|---------------|--------------|
| | | Per cent. | Per cent. |
| 1 | Ease of getting a job | 3 | 18 |
| 2 | Trivial or irrelevant | 14 | 6 |
| 3 | Respectability | 4 | 10 |

Possible explanations have already been suggested for the differences in 1† and 3‡. Probably no general statement of the reasons for the difference in 2 can be made. It would, however, seem that the boys are more free to exercise their own choice in the matter than are the girls, and it may be that the girls have sought by an array of trivial reasons to justify a choice made for them by others, or made unavoidable by circumstances.

In a number of instances proof is given that the choice is not spontaneous : in the sixth form alone five girls out of the eighteen definitely state that they would have preferred another occupation.

Several cases have already been quoted (see page 43). Sometimes the difficulty is financial, as with "*Achmed*," age 19 years. She writes :

"My father could not afford to give me the necessary training for a doctor, so I have just drifted on at school, taking the school examinations, and I expect I shall continue with the training for a teacher. The person who has influenced me

* Four cases of overlapping are allowed for.

† See page 50.

‡ See footnote, page 52.

most is my head mistress. She seems to think I am suitable for the teaching profession, and has led my parents to believe that I ought to pass through the training without much effort."

Many of those who cannot do what they wish, drift, like "*Achmed*," into the teaching profession, but for some the alternative is an office. "*Mary Jane*" who would willingly become either a companion to a lady or, failing that, a kennel maid, puts it thus :

"I do not expect I shall be either of these things but just go to a dull office after all."

Often this pressure is desirable, often no doubt it is unavoidable, but where it must exist, unless the girls realize not only the inadvisability of following their own wishes, but also the advantages and the real nature of the unwished-for vocation, the situation is decidedly unsatisfactory. The chances of successful work in the vocation and happiness for the worker are seriously diminished.

(To be continued in June issue.)

The English Tradition in Education.

By Cyril Norwood, M.A., D.Lit. (John Murray. Pp. viii+340. 10s. 6d.)

THE head masters of our greatest schools have rarely attempted to set forth in writing a systematic account of their ideals in education or to justify by argument their methods. This is, perhaps, not unnatural if, as Dr. Norwood says is usually thought, they are essentially "men of action who should foreswear the pen." This self-denying ordinance, however, is regrettable, and that for two reasons. First, educational thought is the poorer for lack of many records of rich experience by men of the highest ability; and second, education in our greatest schools would, I venture to suggest, often gain if the Heads would attempt to set forth, if only for their own eyes, a systematic and consistent account of what they were really driving at and why they were adopting the methods for reaching those ends. I imagine no thinker has ever attempted to do this without finding weaknesses in his own philosophy of education and of life; and especially if these were submitted to the consideration and criticism of others, progress in educational thought might be greatly advanced. Discussions at conferences do this to some extent, but they are necessarily far too brief and scrappy and tend to emphasize at different times different points, without an attempt at a comprehensive view.

The book under review is doubly welcome, first for the reasons indicated above, and second, because it is an exposition of a lofty view of education, however inadequately it has been fulfilled even in our best schools. It is a delight to a reviewer to deal with a book of this type. In the first place it is extremely lucid and readable. I read it with enjoyment and continued interest, even with a temperature of 101°. Further, it is a brave book, for Dr. Norwood does not hesitate to give some severe criticisms of the public schools as they are to-day. Again, it is a remarkably impartial book; it is, indeed, a notable thing that a Head of one of our greatest residential public schools should give it as his opinion that education at a good *day* school is the best, provided there is also the influence of a good home.

It is also a book of great breadth. The author's wide knowledge of the ordinary secondary schools will not be surprising to those who know Dr. Norwood's work as Chairman of the Secondary Schools Examination Council, but more notable is his knowledge of the work of the elementary schools, his plea for a united profession, including teachers of all types, and his praise of the best of the primary school teachers as "the salt of the earth."

The English tradition in education is held to include five great ideals, of religion, discipline, culture, athletics, and service. The treatment of religion is marked by restraint, common sense, and flashes of quiet humour, while it breathes, as does the whole book, the spirit of a fine personality. If only the difficult question of religion in the schools as a whole could be approached in this mood on both sides, that difficulty would be reduced at once by half.

On discipline Dr. Norwood takes the sane middle line, between the older harshness (with the extreme case of Keate of Eton, who assembled the whole school to watch the flogging of the Sixth Form), and the flabbiness of some modernists who would have no discipline other than that arranged by the boys themselves. "Boys are strange creatures," he writes, with acute insight, "who will play the fool, and yet strongly resent the fact that they are allowed to do it."

One turns to the treatment of "culture" with interest, wondering whether here will appear Achilles' heel, but again one finds breadth of view. The classical education, perhaps incomparable for some, is "by no means an instrument suitable for all," and vocational studies themselves may be "liberalizing."

"All knowledge is of value in itself and for itself," argues the author; surely true if, as is probable, he assumes that the knowing is accompanied by interest. Otherwise, I should stand by Lotze's contention that the life even of an omniscient being would be of no value to such a being himself, if entirely devoid of feeling.

Dr. Norwood does not give reasons why he thinks Latin and, to a less extent Mathematics, are the "most outstanding" of studies which have value in themselves. Is it because of the supposed general training given by these subjects? That does not seem likely, for Dr. Norwood elsewhere points out that a training in Mathematics is no guarantee of careful and exact statement based only on proof. Indeed, his exposition of subject values throughout the book is remarkably free from those fallacies of general "transference" and "formal training" which even the most eminent schoolmasters usually display. He repudiates such doctrines of necessary "transference" even in reference to moral and social training, for example on page 148, where he points out that some public schoolboys who have developed a good social attitude within the school itself, confine their sympathies to their own social class after leaving school. The only place where the doctrine of transference or general "spread" of training is implied is in reference to the effect of games. While we may admit a general and frequent tendency for the ideals of

the sports field to be applied under quite different circumstances, it is surely questionable whether the "resource and generosity and obedience to rule, and the sense of honour" specifically cultivated on the playing field, are inevitably displayed and to an equal degree in the affairs of business and citizenship.

In Part II the author treats of "The Schools as They Are." This section is so full of acute observations on the weaker points of our school system that one longs to quote freely, for they may be attended to when coming from the pen of a great head master though they might be thought ill-informed criticisms coming from those outside, or unpractical if from supposedly mere theorists. Would that the general body of parents could realize "that a school that does not shine in the open competitions for scholarships at the University may for all that be doing sounder work than some schools which do," because the latter may be relying on the possession of a few exceptionally clever boys. It would be good, too, if Dr. Norwood's fellow Heads would act upon the finding, which is surely true, that boys from preparatory schools have been hurried on to "the higher work before they have understood the elements." Would, too, that our organizers of secondary education and many of our University authorities would realize the educational evils which follow when "a plethora of second class brains have been attempting a programme which it takes first class ability to fulfil."

Perhaps the warnings which need most to be sounded abroad are those given in the chapter "The Danger from Mechanisation." Many of them have been often repeated, no doubt, by thoughtful teachers: for example, that things that matter most in education cannot be tested by any form of examination. But Dr. Norwood carries this further: "by imposing a quantitative system of estimating those school-results which can be measured, and ranking schools accordingly, you can take the heart out of your very best men, and very quickly starve the profession by diverting from entry those men of resource, high principle, and initiative which it most requires."

I have left myself no space to deal with Part III of the book: "Things That May Be," in which Dr. Norwood links up his views on education with the wider problems of national and international life. Frequently here within the compass of a short paragraph he expresses some profound principles of moral and political philosophy which open wide vistas and call for vigorous and steadfast action in the future. But I have said enough, I hope, to indicate that this is one of the most important books on education of the present century.

C. W. VALENTINE.

Book Reviews.

Lifelong Education : by Basil A. Yeaxlee. (Cassell and Co., 1929. Pp. 167. 2s. 6d. net.)

Dr. Yeaxlee believes that "constant propaganda on behalf of adult education is desperately needed." The belief has obviously impelled him to write this useful and attractive book. His own interest and labours in the field of adult education are well known, and in this volume he endeavours to communicate his enthusiasm to both converted and unconverted. He succeeds by his humanistic outlook, by his wide experience and first-hand knowledge of the subject; and not least by his easy, persuasive writing. Though his earlier book, "Spiritual Values in Adult Education," was more ambitious and far more comprehensive in its treatment of the philosophy and history of the movement, this volume will reach a wider public, since it is more limited in scope, more definite in its immediate aim, and the case has been more cogently argued.

The main part of the book is concerned with the meaning and the necessity of adult education. His confession of faith is: "Adult education, rightly interpreted, is as inseparable from normal living as food and physical exercise. Life to be vivid, strong, and creative, demands constant reflection upon experience, so that action may be guided by wisdom and service be the other aspect of self-expression, while work and leisure are blended in perfect exercise of body, mind, and spirit, personality attaining completion in society." Such an education, concerned entirely with quality in living and aiming at a "unified, purposeful, disciplined, enriched life" must necessarily be lifelong. The difficulty is that the term "education" has been too limited, and has been confused in men's minds with "schooling"—"with all that is lifeless, prosy, intellectual, remote from 'the joy of life—the mere living';" but the author is insistent that adult education must be interpreted in terms of life and people, and not merely of books and subjects of formal study. It follows that experience and fellowship are at least as important as the acquisition of knowledge, and these factors will always justify the organized educational movement. With his experience and sympathetic understanding, Dr. Yeaxlee can state courageously many truths, as, for instance, when he acknowledges that many adult students do not know what they want or why: but he adds, "The essential consideration is not what a man learns, but why he wants to learn it, how he sets to work, and what the effort makes of him as a personality or as a member of society." Again, to those who would regard the necessity of adult education as a passing phase—"A medicine for a social weakness" until the advent of secondary schooling for all—he answers that all available secondary school agencies will not give an educated nation; since only in the adult period is it possible "to translate knowledge into wisdom." And in view of the discussion to take place at the meetings of the British Institute of Adult Education, the statement, "It (adult education) will not have a fair chance until better preparation is made for it during the years of adolescence" is significant. He denies, too, that it is the necessity of one class or section.

The summary of the movement and the account of the present organization, though inevitably brief, are as good, complete, and up to date, as we would expect from Dr. Yeaxlee. The method adopted is not only historical but also comparative.

The author rightly maintains that only by experiment can vitality be maintained and progress made. "The hidebound is futile." Moreover, all agencies, however informal in their appeal and methods, must be welcomed, directed, and used for the advancement of the human spirit. In his discussion

of educational films he says of this medium : " Hollywood neither need be left to itself . . . nor should be." Of the Press, he states : " Even as it exists, it may be a valuable factor in the acquirement of lifelong liberal education. Everything depends upon the reader." But he is far more hopeful of the influence of broadcasting in creating fresh streams of thought, since it has the great power of arousing interest easily. He gives full credit to the B.B.C. for deliberately shaping this medium to be a powerful though pleasant instrument of adult education. These and other media are of real importance in creating the power of instructed judgment : " The capacity to think things through and to think them together." That this capacity is the fundamental need of a democracy it is impossible to gainsay. Yet out of twenty-five million voters not more than one-eighth of a million are linked definitely to the organized adult education movement. It may be true that a nation is saved by its remnant ; nevertheless, there is urgent need of the humanization of man in society.

What, then, are the problems of organized adult education ? They are known to all engaged in the work, but Dr. Yeaxlee deals with a number of them—the provision of classes, subjects, tutors, finance, the question of method and training, correlation of effort, and inter-dependence of all forms and stages of education—in a wise if rather summary way.

There can really be no excuse for anyone interested in educational work failing to read this book.

I.J.

Aspects of Thorndike's Psychology in their Relation to Educational Theory and Practice : by H. G. Hullfish. (Ohio State University Press. Pp. v+113. \$1.0.)

This monograph is the first of a series of studies under the title of " Contributions in Principles of Education." It is a useful piece of critical work, but the work would have been equally valuable if its 113 pages had been reduced to half that number. The monograph is essentially a criticism based upon the author's interpretation of John Dewey.

The author's main assumption is that there can be no real progress in educational theory and practice until the educationist bases his scheme on a single psychological system. This, of course, is arguable.

In the first chapter he points out that as each system of psychology becomes dominant it affects educational theory and practice, but that these effects persist long after the psychological systems become mere historical material. He examines briefly the main features of the systems of Locke, Herbart, and Watson, and shows how they have affected educational practices (p. 14). " At any rate, the educational psychologists should formulate sharply the alternative positions, and clearly designate the implications of each. A practice which makes use of all three positions, or any two of them, should not hope to retain the respect of those who look to education as the saviour of civilization."

The second chapter contains a brief statement of Thorndike's doctrine. Then follows a chapter dealing with his concept of " Readiness." The author draws attention to the fact that in one place this readiness is explained in purely neural terms, while in another it assumes a mental mantle, and in a third it is clothed in ambiguity—e.g. : " The arc is not first constructed and then used, but is constructed as the act proceeds ; and this progressive organization is, in the end, what is meant by conscious behaviour " (p. 33). The fourth chapter deals with the " satisfaction " and " annoyance " concepts, which occupy a central place in Thorndike's position. He quotes Thorndike as follows : " Successful operation can . . . be . . . defined . . . only as a characteristic internal behaviour of the neurones," and points out that satisfaction and annoyance arise therefrom, and yet Thorndike describes

them as "potent determiners of behaviour"—practically the behaviourist position.

In the two following chapters the author shows how Thorndike attempts to wrestle with the mental factors. On page 65 he gives the quotation: "A mental function refers always to some actually or possibly observable events in behaviour, not to any mythical entities beneath behaviour." But since "all learning is analytic," the concept grows by the abstraction of certain elements which are not ideas or entities beneath behaviour. The author's comment on this position is: "He retains enough of the older positions to keep from doing violence to the usual belief in 'mental life,' and after paying homage to this life, he gains favour as a vigorous scientist by stressing the observable activities of man."

The remaining two chapters attempt to show how little bearing Thorndike's psychology has on the ultimate aims of education, and of what little use they are to classroom practice. With some show of justification the author claims that a routine applicable to all the little details of instruction will never be of much service towards a clear apprehension of the ultimate aims of education (p. 84): "When this complete theory of education is written the teacher need no longer fear that two o'clock on the third Friday of every month may find her without a definite objective to attain. With each immediate moment provided for, the educational circle will be closed and the teacher need only perform the listless duty of maintaining the *status quo*. The theorists may, of course, dust off the 'ultimate' embellishments occasionally in order to keep their mansions attractive; they need not, however, entertain the fear that they will be called upon to explain the presence of these priceless antiques."

E.J.G.B.

Youth: The Psychology of Adolescence and its Bearing on the Reorganization of Adolescent Education: by Olive A. Wheeler, D.Sc. (University of London Press, Ltd. Pp. xv+202. 5s.)

As the sub-title suggests, and as the writer states in her preface, this book is meant for a wide public; parents and voluntary workers on the one hand, and, on the other hand, those directly concerned in the task of reorganizing adolescent education; administrators, members of local education authorities, training college lecturers, and, particularly, the students and teachers who are to work in the adolescent schools now being differentiated in preparation for the raising of the school-leaving age in 1931.

With this ambitious aim in view Professor Wheeler has produced a very good book. It is easy to read; the writer obviously knows a good deal and has thought a good deal about her subject, and her ideas are clearly expressed; her outlook is high-minded but practical, and the book reveals an intimate knowledge of schools and of human beings. Though covering a wide field it is not vague. It is unencumbered by a mass of detail, sufficient are given, and more can be obtained by the help of numerous references given at the end of each chapter.

As the book is intended for students amongst others particular attention is drawn to one defect. Professor Wheeler writes on page 17: "The newer educational psychology should have a higher standard of accuracy and more scientific methods for the discovery of the facts, but it should also emphasize the need for apprehending the continuity of each individual experience and thus of grasping the individual as a whole," and we agree. But it is not easy to combine satisfactorily the scientific and the humanistic approach, and Dr. Wheeler in avoiding one pitfall walks into another and falls short of her own standard. Her account of her questionnaire is not an account of an exact

piece of scientific, statistical investigation. It is rather a review of outstanding adolescent characteristics, in which the results of her questionnaire are used to give point to general statements and to bring out "the rich individuality of each person."

If these results were not supported by other investigations, as they certainly are, they would be entirely unreliable as ground for generalization.

As for the account of adolescent characteristics, a fair appreciation was given by one of the present reviewer's students in answer to a general question on adolescence. She wrote: "I feel that Professor Wheeler has given a very fair, sane view of the mental characteristics of adolescence without carrying certain peculiarities too far, or exaggerating certain morbid inclinations. While violently disagreeing with many of the extravagant views taken by some psychologists I am inclined to agree with everything said by Professor Wheeler and to regard all her statements as being as accurate as possible."

When she tackles the question of the reorganization of adolescent education Dr. Wheeler has something equally worth saying, though she is too wise to suppose she can provide a solution to all the problems. She presents facts and problems and suggests solutions and lines along which solutions may be sought. Reorganization provides an opportunity of adjusting education to meet the needs of adolescents. It may easily be merely a reshuffling of schools and teachers, or, at best, a struggle through, by the method of "trial and error" of the new adolescent schools to a definite, useful, and recognized place in our educational system. But the method of "trial and error" is wasteful if not combined with, and founded on, available knowledge, knowledge and principles tested and acknowledged. Chapter IX, of eleven pages, is particularly interesting. It deals with such problems as that of co-education, the selection and transference of pupils, the relation between secondary and senior schools, examining bodies, and advisory committees. In conclusion, the present reviewer can echo the words of Sir Henry Hadow in his introduction to Professor Wheeler's book: "I have learnt a good deal from her book."

F.M.A.

Elementary Principles of Education : by E. L. Thorndike and A. I. Gates. (The Macmillan Company, New York, 1929. Pp. 335, with Index and full Table of Contents.)

The authors have set themselves a difficult task, viz., to write a text-book setting forth the main philosophical and psychological bases of education, with their principal applications to the problems of school instruction, and to do this so that it will be understandable by students who are making a first study of education, and may have had no previous professional experience as teachers. Frankly, we should not like to give our own young students the duty of assimilating, as a *first* course, a large mass of new thought and research presented in a rather didactic and summarized form. Young students, we believe, should not learn education as they learn the climate and productions of some continent. They should *think* it, and at first somewhat slowly and tentatively. Only by thinking his problems in discussion with his tutor or his companions, or in self-debate, will he grow to the right outlook and understanding.

Our authors, however, have given us a valuable, simple, and clear outline of the position of American educational thought which could be profitably studied by all teachers who have had some experience of school life and conditions. Its educational philosophy is that of the American school of thought, that seems to have plumped wholeheartedly for the idea of "social efficiency" as the end of life and the purpose of education. Naturally, social

and civic training and the economic and civic needs of life find an important place. We ourselves believe in social efficiency and civic and economic training, both general for all and special for some ; but we should like also to possess our own souls sometimes in private, and realize in our thoughts and life that truth and beauty are not wholly and altogether matters of social welfare.

Like Dewey, our authors emphasize the doctrine that the school should be a place where the child should live, and realize himself in thought and action in a fuller and wider way. We find, however, as in many other cases, that our authors tend at times, unconsciously, to think of the details of school work in terms of a preparation for future life. We do not blame them. We often find ourselves doing it. The mass of habit and tradition in ourselves, the teaching profession, and the general public, will not let us do otherwise ; and, after all, schools as places to live in would be very expensive affairs, and the teachers themselves would have to possess outlooks, skills, and powers vastly different from those their training often gives them. At present, I fear, we must be content with " mass schooling," and try to make that as much a " living " as circumstances permit.

The chapters on the curriculum and methods of teaching are the clearest for young students. Those on the criteria for the determination of the curriculum give interesting points of view. All the usual methods of teaching and learning are briefly outlined and discussed. We were startled to see the resuscitation of Herbart's Formal Steps. We were of opinion that this formal and artificial analysis of the process of learning was largely of historic interest, and had in the training colleges given place to a method that expressed the more natural process of knowledge and growth. In every form of educational activity the idea of growth is vital. The child grows in interests, in power, in knowledge, in ideals, and our methods of learning must, if they are to be true, be determined by the laws and order of growth. No artificial and formal arrangement of facts for presentation and generalization can possibly be of the nature of growth.

One valuable part of the book is its full bibliography (largely American), and its list of problems and questions after each chapter. These problems throw the student on to many important topics of school life and instruction, and would bring the ideas presented in each chapter into vital relations with the problems of the school.

W.P.W.

The Aims of Education and Other Essays : by A. N. Whitehead, F.R.S. (Williams and Norgate. Pp. vi + 247. 7s. 6d.)

It was disappointing to find, on opening this book, that it was not a new work, but a collection of essays already published, together with half a dozen chapters selected from the author's book on " The Organization of Thought." However, it is useful to have these all gathered together into a book which has a definite unity of its own, and which cannot fail to stimulate thought on the topics treated.

Dr. Whitehead writes with extraordinary lucidity and force, and never more so than when he is inveighing against the view of education as the manipulation of a " dead instrument." You cannot postpone the life of the mind, he urges, until you have sharpened it.

His interesting discussion of the function of the university is an elaboration of the principle that " The justification for a university is that it preserves the connection between knowledge and the zest of life, by uniting the young and the old in the imaginative consideration of learning " (p. 139).

It is curious that Professor Whitehead, after tilting most successfully at the doctrine of " formal training," still rampant in the higher educational circles, comes dangerously near to falling into the same error in his discussion of the value of Latin translation as a " discipline." His argument here is not, I think, convincing.

C.W.V.

A Sceptical Examination of Contemporary British Philosophy : by Adrian Coates, M.A. (Brentanos, Ltd., London, 1929. Pp. 256. 10s. 6d. net.)

"The Contemporary British Philosophy," which Mr. Coates sceptically examines, is the second volume of the series of essays edited under that title by Professor Muirhead, in which a representative set of British philosophers expounded their own philosophies. And so we have the reactions of Mr. Coates to (among others) Professors Thomson, Sorley, Webb, Taylor, Smith, Ward, Hicks, and Moore. I gather that he learned philosophy in Oxford ; his sympathies are all with Cambridge. He describes himself as a common-sense pluralist, and he holds that most philosophy is meaningless, or, at any rate, vitiated by fundamental ambiguities.

Mr. Coates speaks of his examination as sceptical ; I should be inclined to add the epithet " dogmatic." The dogmatism may be in part only apparent, for he has to follow his authors, and cannot build up his own case in a systematic way ; but there is more in it than this. He has arranged his authors in his own order, beginning, he tells us, with those he disagreed with most, and felt most competent to refute, proceeding to those he was least confident about, and making " Professor Moore (in company with James Ward and Professor Dawes Hicks) the terminus of my journey and sweet resting-place of content." This order involves that he lets us know his views successively on such topics as mind and matter, progress, value, monism, freewill, imagination, and meaning, ending up finally with pluralism, sense-perception, and common-sense ; but this is the method of Jack Horner or, perhaps, of the " Song of Sixpence," rather than of a philosophical treatise ; and we are left in the end a little vague as to how these varied contents are mapped out in his own mind. But his views are always vigorously expressed, and his book is nowhere dull.

L.J.R.

Educational Sociology for Beginners : by D. Snedden, Professor of Education, Teachers' College, Columbia University. (Macmillan Co. Pp. xiii+636. 15s. net.)

This book is evidence of the interest of American educators in the scientific study of social problems and of their belief that teachers require a background of sociological knowledge. Nearly half of the book is devoted to accounts and interpretations of American family, political, and cultural life. A few chapters are given to discussions on the responsibilities of teachers in their professional relations and in the direction of school societies, and, in conclusion, a number of American problems and theories as to the betterment of education are considered.

Though the book is written for American students, others will find much that is stimulating and suggestive in it.

A.E.C.

The Psychology of the Pre-School Child : by James Drever, M.A., B.Sc., D.Phil., and Margaret Drummond, M.A., F.E.I.S. (Home and School Library.) (Partridge. Pp. 222. 6s.)

This is an admirable introduction to the study of the child of four or five, produced by a happy conjunction of authors. It appears in the Home and School Library, edited by Dr. Kimmins, and as it suggests would be suitable both for the parent and the teacher, should the pre-school child get into some kind of school. It is written in simple language, and includes a useful summary of tests for infants from four months to five years. The topics dealt with include the instincts of the child, the beginnings of thought, play, and the learning of language. It is regrettable that there is no index.

C.W.V.

Introduction to Education : by F. L. Clapp, W. L. Chase, and C. Merriman. (Ginn and Co. Pp. xix + 569. 12s. 6d.)

The authors of this compendious book believe that the work and professional relationships of any teacher demand acquaintance with the general field of education as well as an intimate knowledge of the comparatively few divisions of that field that relate directly to his own work. They deplore that the young American student who is preparing to teach acquires a knowledge of only a small part of the entire field. To remedy this supposed evil they here present what may be described as "an introductory and orienting" survey of this entire field.

The scope of the work is enormous, including a sketch of (1) the agencies and influences which have shaped the present American system; (2) foreign systems of education; (3) general problems of organization and curriculum of the various types of schools; (4) processes of learning and the fundamental methods of teaching.

The book seems generally well written, competent, and so far as tested fairly accurate. As a summary for the mature student and a book of reference for the teacher in harness it should have value. For the introduction of the beginner in the subject which it professes to be it is surely impossible and dangerous. There is a worse fate than that deplored by the authors of failing to see the wood for the trees. It is to be completely lost in the wood, especially when very young.

M.M.A.

Manual of Psychology : by G. F. Stout. (University Tutorial Press, Ltd. Pp. 680. 12s. 6d.)

This standard work has been revised by Mr. C. A. Mace, in collaboration with the author. Gratitude is due to Mr. Mace for undertaking a valuable but most difficult task. It is no light thing to try to amend or expand the masterly treatment of Stout. Some important parts have been re-written by Stout himself, and one gathers that other parts are the result of close discussion with the reviser. It would be an advantage if in a further edition it could be definitely stated that the whole work is approved by the original author, for although one should judge work on its merits and not by the name attached to it, the views of Stout are of historical importance in the development of psychology.

One of the most welcome things in this revised edition is the bringing out more clearly of the relation of the Gestalt psychology to Stout's own views.

C.W.V.

Developing Personality in Boys : by W. Ryland Boorman. (The Macmillan Company, New York, 1929. Pp. 257. 10s. 6d. net.)

The author of this book, which has a sub-title, "The Social Psychology of Adolescence," is the Director of Program and Research, Chicago Boys' Club. Mr. Boorman has not a view point of his own, and in the main adopts that of William I. Thomas; the author hopes that the book will be useful to parents, teachers, church workers, scoutmasters, and boys' workers generally, and suggests ways in which they might do fruitful research in personality, and in particular give a boy a new notion of what he can be, so that he will try to measure up to the new rôle. The book introduces an intimate type of data about boys, taken from life histories, letters, and diaries. In order to illustrate his chapters on the under-organized, well-organized, over-organized, and disorganized personality, the author's own illustrations are not as interesting as those he quotes from other writers, and are not as broadly selected as one could wish. At the close of each chapter will be found a variety of suggestions to stimulate additional study; these are very practical and seem to be the most valuable part of the book.

The Principles of Educational Policy : by Nicholas A. Hans, Ph.D., with an introduction by Professor J. Dover Wilson, Litt.D. (P. S. King and Son, Ltd. Pp. xiv + 191. 6s.)

This little book, to quote Professor Dover Wilson's introduction, "is an interesting essay in a hitherto little-worked field of study—Comparative Education." Dr. Hans is singularly fitted for such work by virtue of his Alsatian parentage and Russian upbringing, his wide knowledge of languages, the Directorship of Education at Odessa which he held under the Kerensky régime, and finally the research he has done in England since the Soviet Revolution. His present work is an examination of the ways in which the leading states deal with the varied problems of education, with the object of deciding what principles should govern the educational action of a democratic state. The book shows a wise use of his rare opportunities of acquiring knowledge and makes very profitable reading.

The Science of Character : Ludwig Klages : translated by W. H. Johnston, B.A. (Allen and Unwin. Pp. 308. 10s. 6d.)

This book, though by a writer little known in this country, is translated from a sixth edition of the German, and the cover states that the author enjoys the reputation of being "*the* leading psychologist of Germany." It is written in a vigorous style, and it is not surprising to find that the book has had a popular vogue. The author's interests (and reading) as a psychologist are perhaps as well indicated by his index as by anything else. There are twenty-three references to Nietzsche, fourteen to Goethe, and fifty-two to "soul" or "spirit." The only competent psychologists to have more than one reference are Herbart with three and Wundt and Lipps with two each. Only two or three others are mentioned.

Training Children to Study : by Bessie W. Stillman. (Harrap. Pp. xix + 247. 5s.)

This is an outline of work done in some grades of a department of the Ethical Culture School, New York City, in the attempt to teach children "to analyse the subject matter with which they deal; to discriminate between important and minor points; to trace causal relations; to estimate ethical values; to question the validity of statements, to suspend judgment until data have been accumulated sufficient to justify generalization."

The writer does not pretend to have found a method of procedure which will attain this lofty aim. She presents results which are highly suggestive, and in the account of experiments in different school subjects teachers will find some interesting practical ideas on the subject of methods of study.

Creative Imagination : Studies in the Psychology of Literature : by June E. Downey. (Kegan Paul, Trench, Trubner, and Co., Ltd. Pp. 230. 10s. 6d.)

This is a useful contribution to the psychology of *Æsthetics*. The title is somewhat misleading, for the book is in one sense wider than its title: dealing with appreciation as well as "creation." The literary critic may think undue attention is paid to the examination of analysed elements of *æsthetic* consciousness. There are chapters on "Illustrative Imagery," "On Seeing One's Self," "Inner Speech," "The Poetry of Colour," and so forth. But these constitute at least one legitimate way of approach to the *æsthetic* problem.

Though there is a wide range of authors referred to, Professor Downey seems to have overlooked some important recent researches bearing most directly on some of her discussions.

A Manual of Ethics : by J. S. Mackenzie, M.A. (University Tutorial Press, Ltd., London. Pp. 426. 9s. 6d.)

Even in its earliest editions this was so excellent a book that it is doubtful whether there was so good a general introduction to the study of ethics published in English. In its new (sixth) edition there is much new material and careful revision, including a discussion of the views of such modern writers as G. E. Moore and the late Hastings Rashdall. It is now so comprehensive, and further, it touches so many aspects of life, and refers to such a rich variety of great literature outside that of philosophy in the more technical sense, that one might almost say that a thorough study of this book and a following-up of the references to general literature, art, poetry, and religion would almost provide in itself a liberal education.

The Pedagogical Value of the True-False Examination : by A. W. Cocks. (University Research Monographs 7. Warwick and York (Inc.), Baltimore. Pp. 131.)

This is the record of a very useful piece of research dealing with the relative reliability of the simplified tests indicated by the title. The most interesting results are that the true or false tests are not only as reliable as any other type of "objective" examination (as contrasted with the essay type of examination) but that they have considerable "motivation value" and some instructional value. It was also found that the correction of papers by the pupils themselves greatly increased the instructional value of the tests. The author concludes, also, that the method is particularly useful with dull pupils.

A New Primer of Psychology : by Mahajot Sahai. (Macmillan and Co. Pp. vii+190. 3s. 6d.)

The aim of this book by the professor of psychology at the Mohindra College, Patiala, is the provision of an easy exposition of psychology which will prove useful to the beginner. The result is a simple, sound little volume, sufficiently interesting to encourage those for whom it was meant, and to make them wish for more. The writer displays the knowledge and skill needed for his task. Controversial matters, particularly those of detail, are wisely avoided, and numerous, but not too numerous, references are given.

An Introduction to Individual Psychology : by A. Raven. (Heffer. Pp. ix+145.)

Here an attempt is made to analyse the mind from the dynamic standpoint ; to show what are the sources of human energy, and to indicate how that energy can be liberated to the fullest extent ; to examine those processes of mind by which human energy becomes tied up and rendered unavailable for the constructive purposes of life or the achievement of success.

The book is pleasantly written, and meant for a popular audience. In it the writer succeeds in the aim of keeping before readers the idea of "a positive and courageous attitude towards life."

The Case for Nursery Schools : by The Education Enquiry Committee. (Philipson. Pp. xvi+154. 4s. net.)

To one who has been long in close intimacy with a nursery school it seems curious that a case should have to be made for it, but no better introduction could be made to the functions, conditions, problems, and probable future development of this type of school than is to be found in "The Case for Nursery Schools," a report of the Education Enquiry Committee who have already issued the excellent account of "The Next Step in National Education."

The present report deals with the problem of the child of pre-school age who cannot receive effective nurture and education at home, and who, if fortunate, finds his way into a nursery school class or crèche.

The Committee's recommendations are most valuable, and the two that are cited in this review will suffice to give their attitude towards the problem of child education.

In the first place, they suggest that the education of the pre-school child should be in classes attached to infant schools rather than in separate buildings, and this for three reasons: Such a class would draw the attention of both teachers and the public to the successful results of giving growing children right surroundings and careful nurture. Thus, also, would the children avoid a change of school at five, a change that demands readjustment at a time when all his energy should be used on direct development. And, finally, by having such nurseries on the premises, the elder girls could learn how to care for children in the only real way. In their last year at school these girls would help in the nursery classes as part of their "home making" course.

To people who think of children as children and not as a nursery child, infant or junior mixed, surely this recommendation will sound reasonable? In no place where a nursery school is needed is care for nurture much less necessary for the six and seven year olds. Nor is it understandable why the child of five should need a middle-day dinner properly served while the hungry and dirty boy of eight has to rely on a piece of bread and jam, eaten in a street or playground, and what scanty washing the slum home or rural school provides.

The Committee does not seem to be unduly exigent in its recommendation on staffing these nursery classes: one certificated trained teacher for every forty babies with one student nurse to aid her for every ten babies.

If all new primary schools had open-air nurseries for the children under five, hot water for baths and suitable lavatory accommodation, means for drying all wet clothes, adequate staff and student nurses, how soon the effect would become apparent in an agitation from the teachers of the infant and primary departments for similar suitable conditions! How can the teacher of from forty to fifty-five children of six years old be responsible for their daily habits? Why should good habits gained in the nursery lapse in the infants' school? Why should the child from five to eleven be unsuitably fed and dirty?

The fact is that right nurture has for too long been disregarded in planning elementary schools, and though the younger the child the more essential it is, yet lovers of children would sacrifice much to get fair conditions for health, happiness, and education for all people under fifteen.

Open-air classes for all who need them, large, airy, sunny rooms, baths and hot water, playing fields and gymnasias, good healthy food, teachers trained in the care of children, smaller classes especially in infant and junior schools; then, and not till then, will English children grow up, becoming those delightful people that most could be and many at present are not.

It is to be hoped that the next piece of work undertaken by this excellent Committee will be "The Case for the Primary School." N.C.

The Centenary History of King's College, London: by F. J. C. Hearnshaw. (Harrap. Pp. 543. 21s. net.)

The history of King's College will, according to the particular prejudices of the reader, appear either the record of an heroic fight against adversity for the sake of a principle, culminating in an unrighteous defeat, or else as a stubborn policy of reaction which for too long resisted the forces of progress.

King's College, named after that paragon of piety and learning George IV, was founded in 1828 as a counterblast to the "style of infidelity building at the end of Gower Street"; just as, some twenty years earlier, the Church had woken up to the activity of the Lancasterian schools and had hastily formed the National Society, so now that the Philosophic Radicals and the Dissenters had shown the possibility of a university for London, the Church again stepped in as a rival. There is no reason why the Church (or any other religious body) should not found a college for its own members; though even for 1828 it seems an unwise policy to enact the provision that "no person shall be competent to act as a Governor of the College, or as a member of the Council, or as Principal, or Professor, or tutor (with the exception of the teachers of Oriental or modern languages) who is not a member of the United Church of England and Ireland." But there is no excuse for the attitude which King's College, with Oxford and Cambridge, adopted towards the London University. Between them they succeeded in holding up the University Charter; and when ultimately (1836) the University of London was established, with University College as a non-degree-conferring institution, King's College, regarding the new university as "an object of suspicion to the wise and of abhorrence to the good," deliberately discouraged its students from taking London degrees. It is no wonder that such an institution passed through many vicissitudes. It had to depend financially on contributions from Churchmen; and though it started off most enthusiastically—under the patronage of the Duke, then at the height of his popularity—when it came to paying up the faithful were less eager. Hence the story is one of constantly impending bankruptcy: for years the College existed on the profits of a boys' school crammed into the basement; a levy was frequently made on the inadequate salaries of the professors; and once the Council were reduced to selling their silver spoons. Finally, to avoid extinction, the Council accepted grants of public money, which carried of course the condition that the embargo on non-Anglicans should be removed; hence, by the King's College Act, 1903, thirty years after the Universities Test Act had set Oxford and Cambridge free, were religious tests for members of the staff abolished.

That is one side of the picture. On the other we have a record of much useful and distinguished work; one need mention only the names of Wheatstone, Clerk Maxwell, and Lister. No less famous was F. D. Maurice, the story of whose unhappy relations with the College is told fully, if somewhat unsympathetically, by Professor Hearnshaw. Then there was the vigorous policy of "elasticity," which led to so many pioneer developments. Some, like the military and day civil service departments, were failures; others (e.g., the engineering and evening class departments) were most successful; others again, though ultimately prosperous, led to many troubles—such were the Medical School, with its complement of refractory nurses, and the Department of Theology. The Women's Department, after an interesting and chequered career, was at last absorbed into the general life of the College. The enormous mass of material has been very skilfully dealt with by Professor Hearnshaw: he has made the story and its many actors really live. From his pages one gets a vivid picture of the prelates who founded the College, of its long and extremely varied line of Principals, and of its professors. The author's wit enlivens many a passage which a less able writer would have left dull. Two examples may be given. Dr. Giles, who was an unsuccessful candidate for the chair of Classics in 1831, is described as "a lavish benefactor of that large class of students who prefer to see their Latin and Greek authors not in the flesh, but in the Bohn." And of Principal Burrows we read, "his brother was Bishop of Lewes, his cousin Bishop of Truro; while Mrs. Burrows was daughter of the Bishop of Chichester and niece of the Bishop of Salisbury. In matters ecclesiastical, therefore, his hands were

supported and controlled by four Aarons and Hur." Even the purist who scorns all paranomasia must smile at these examples of that figure.

The book is valuable not only as a record of the internal affairs of the College, but as a contribution to the history of the University of London, and indeed to the general educational and social history of the nineteenth century. It is well printed and illustrated ; its style makes it readable as a continuous narrative, whilst it is also very useful as a work of reference. One feels that the difficult task of writing the history of King's could not have been better done.

F.A.C.

English Girlhood at School : by Dorothy Gardiner. (Oxford University Press. Pp. xiii + 501. 18s.)

Mrs. Gardiner has done a very valuable work in this "study of women's education through twelve centuries," for it is the first adequate account of the subject. The book contains an immense amount of carefully documented evidence ; but the author has arranged the material so skilfully that the narrative is not lost in a mass of detail. Thus the book can be read straight through with interest, or can be used for reference on particular points. It is naturally impossible to summarize a book of this kind. Perhaps the most outstanding fact that emerges is that, in spite of many vicissitudes, there has always been some provision for the education of girls. It is a commonplace that education reflects the spirit of the age, and it seems especially true for girls' education. For at some times women have been given a place of artificial, almost divine, honour ; at others, they have been objects of contempt, even of repugnance. Their education has varied accordingly. But even now, when we have attained nearer to sex equality than ever before, we are only on the way to finding out the most suitable sort of training for girls ; and future generations will doubtless regard us as no less mistaken than we consider the Victorian protagonists. However that may be, there are still traces of the clash between the patristic ideal of a "fugitive and cloistered virtue" for women and the opposed aim of training girls in accomplishments which will make them attractive to the other sex—or, to put it in a more agreeable way, make them better companions for their future husbands. This diversity of ideals runs through Mrs. Gardiner's history ; and it takes also the form of the minor antipathy of the plain practical woman towards the blue-stocking—a type that has always existed. One very interesting feature of girls' education is that they have, in all periods, been sent away from home, either to nunneries or "placed out" in other families, or in the boarding schools which seem to have been started by Dutch refugees in the sixteenth century. Mrs. Gardiner's chapters on the boarding schools are particularly valuable, and contain much information that will be new to most readers ; so, too, are her accounts of earlier advocates of female education, such as Mrs. Astell, Mrs. Elstob, Mrs. Makin, Mrs. Woolley, and Mrs. Chapone—and various famous men, e.g., Fénelon, Rousseau, and Erasmus Darwin. One is impressed again and again by the sensible and often modern views of these old writers. The practical details of school and home education in different centuries are likewise given. An epilogue of a few pages tells briefly the story of nineteenth century development ; as the facts of this period are accessible there was no need to devote much space to them here. On the general history of girls' education in England this book is likely for long to remain the authority. As it is published by the Oxford University Press, there is no need to praise the style in which it is printed and in which the illustrations are reproduced.

F.A.C.

The Country School—Its Practice and Problems : by M. K. Ashby.
(Oxford University Press. Pp. xii + 276. 6s.)

Miss Ashby attempts to give balance to our view of rural education by getting us to look at it from the point of view of the teacher, and incidentally the children. The book is largely a record of journeys and observations in country schools and the conclusions she draws from them. Her vignettes are sometimes delightful, sometimes depressing, but always true to life. The depression chiefly results from the picture of the labourer's child. Why should the lot of the labourer in the most beautiful of countrysides be so lacking in inspiration? The problem is a social problem, and one is tempted to the conclusion, though here Miss Ashby would probably not agree, that the only way of giving to the child of the subordinate ranks of rural worker a chance of realizing the rich potentiality of its life is to give it a boarding school, a boarding school more joyful than any existing school, but at all costs a school removed from the locality of the child's origin. Provision should be made to enable the parents to share the joy, but most would not complain at separation if they could be brought to see that in one generation they could be reunited in a wider life with children who would make sure that there would be no need of boarding schools for their grandchildren.

That it would be real economy on the part of the State to provide such schools there can be no doubt in the minds of those who think that the chief object of the State is to assist in making happy the life of the citizen. If it be argued that such a course would denude the countryside of labour, it might be replied that a countryside which offers so little of beauty to its worker will inevitably meet that fate. At the same time little effort would be necessary to show that this need by no means ensue. Imagine the richness of the alternative—our countryside cultivated by educated men!

Rural areas, however, vary widely in type, as the author reminds us, and not all are to the same degree in need of such drastic treatment. The reader will be struck by the practical way in which Miss Ashby grasps all aspects of the problem, and the sympathetic insight she has shown in equipping herself for her task. Her historical part, she says, is not the work of an historian—but it is very good history, "the history," to use her own words, "which is current as legend and lore and influences the present condition and repute of the school." In the same fortunate vein she discusses such matters as school buildings and their relation to reorganization, the rural bias and the curriculum, the rural teacher and his training, and provides us with a host of other matter which, if considered by everybody in her spirit, may make unnecessary the clean sweep of the present writer's boarding school.

B.C.L.J.

Foundations of History-Teaching : by F. Clarke, M.A. (Oxford. Pp. vii + 171. 4s. 6d.)

It is with the teaching of history as a primary school subject that Professor Clarke is concerned, but what he has to say concerns all history teachers. We agree enthusiastically that the object of history teaching should be to elucidate the present, that the teaching of history is the communication of a way of life and that the teacher must himself have lived the life if he is to touch the springs of it in his pupils and stimulate its growth. The legacy of the nineteenth century makes still largely true, so far as history is concerned, Professor Clarke's statement that those who educated the well-to-do were educated and not trained, and that those who educated the poor were trained but not educated. The second part of this reproach will only cease to apply when he can no longer say that the work of the elementary school, and he might have added many of other types, is "still too much a thing of tricks and devices and too little a thing of the large humane discourse that looks before and after and of the critical intelligence that looks deep." B.C.L.J.

Teaching in College and University : by Carter V. Good. (Warwick and York, Baltimore. Pp. 557. \$3.00.)

The sub-title, "A Survey of the Problems and Literature in Higher Education," describes fairly aptly the field which is covered, for, although he is concerned primarily with American universities, colleges, and normal schools, the author makes many references to literature which is solely concerned with the secondary schools. It should be admitted, however, that whenever he does this he claims that the conclusions quoted may fitly apply "at the college level." The ostensible purpose of the book is to survey the efforts which have been made in recent years in various American universities, departments of education, teachers' colleges, etc., to define aims, revise curricula, and improve methods of teaching and testing. It is of interest to note the statement that 75 per cent. of those receiving the degree of Ph.D. take up teaching (largely "at the college level"), and hence the plea that some instruction in educational theory and methods of teaching college students should form part of their university course.

Mr. Good is to be congratulated on the completion of a task which must have demanded laborious industry and great patience. It is calculated that some 450 books on education are published in the United States each year, whilst nearly 2,000 articles appear in educational periodicals. One gains the impression, from the copious bibliographies at the ends of the chapters and of the book, and from the numerous footnotes, that the author must have made references in some way or other to almost all the publications of the last decade which deal in any way with the matters with which the book is concerned. This is one of the chief values of the book, for anyone using it has, in handy form for reference, exhaustive lists of books and articles with the sources from which they are to be obtained clearly indicated.

Mr. Good's method is not to obtrude his own views, but to quote the main conclusions made by those to whose work he refers, leaving to the reader the task of looking up the evidence, this being facilitated by the numerous footnotes, supplementary references at the ends of chapters, etc., which have already been mentioned. It seems almost a pity that in a work of this exhaustive nature there is no reference to our English colleges and universities. But although it is concerned solely with American institutions, the book should prove of value not only to English students of American higher education but also to those who are interested in similar problems in English education. T.P.H.

The Danish Folk School : by Olive Dame Campbell. (Macmillan, New York. Pp. xv+336.+ Appendix and Index. 8s. 6d. net)

An account of the origins and operation of folk schools in Denmark and elsewhere among agricultural people and dwellers in wintry, ice-bound lands by one whom circumstances enabled to see what was done almost entirely from the inside, meeting friendly hospitality everywhere. After a short historical sketch showing how the particular educational problems of Denmark have arisen, the author gives an account of the life and philosophy of Grundtvig and the way Rodding Folk School and Askov were the means of converting his theory into practice. Kristen Kold was the apostle of the doctrine that was to lead to a movement providing a form of education which seems peculiarly adapted to the needs of the young people attending the schools. Mrs. Campbell has packed an enormous quantity of material into her story. Denmark, Norway, Sweden, and Finland received her; she describes her experiences among the teachers and scholars in the schools she visited; and, altogether, has produced an attractive and informative volume. The illustrations add greatly to its interest, helping us, as we read, to imagine ourselves with the whole-hearted enthusiasts who run those folk schools, and in some measure enter into their lives. A.P.B.

Teaching English : by G. Y. Elton, edited by J. Compton. (Macmillan. Pp. xiii + 110. 3s.)

This little book, fragmentary as it is, was very well worth publishing. It is plain that the author, had he lived, would have brought a new spirit into the teaching of English ; indeed, even as it stands, this book may well prove as influential as did Mr. Lamborn's " Rudiments of Criticism." There is the same freshness of approach, the same desire to get away from outworn pedantries, the same insistence on enjoyment and sincerity. Every teacher should profit from reading it ; although not every teacher could work out its principles. Thus it would be fatal if the very stimulating exercises which it contains were simply given out as exercises to be mechanically performed, like the exercises in any other text-book of composition ; or again, if remarks of Mr. Elton's were unintelligently applied, such as the following : " To teach people to dare to make heaps of mistakes, and throw mistakes in heaps in all directions (i.e., teaching them to live) is perhaps the main object of an " English " course. So it's rather important to see that they do their writing work in a form that won't make them frightfully conscious of the bogey of incorrectness." One can imagine the sort of mess that some people would make with the justification of what they supposed to be the meaning of this statement. On the other hand, it would be harder to mis-apply the view that " The teaching of composition to-day, in reaction against the dry-as-dust methods formerly general, is suffering from a conception of ' self-expression ' which tends to foster emotionalism, introspection, and self-expression. Everybody nowadays accepts the doctrine of helping a pupil to develop and express his individual tastes and powers, but not many people (teachers or others) appear to realize that it's equally important to encourage him to get away from and despise the ' self-standpoint.' Both principles should be active in every part of an English course." This warning is opportune : there is too much sloppiness about English teaching nowadays ; and the danger is that in a sudden revulsion we may go back to the " dry-as-dust methods." Mr. Elton makes many suggestions, especially in his exercises, for steering a middle course.

Many readers will no doubt be puzzled by the rather mystical tendency that runs through so much of the book. One can only suppose that the author was still groping towards truths that he would have envisaged more clearly had he lived. So, too, with the somewhat exaggerated reliance on Coué. But these are minor points. It is much the best book on teaching English that has appeared for years, and it deserves to be widely known. F.A.C.

Stanislaus Konarski : by W. J. Rose. (Jonathan Cape. Pp. 288. 7s. 6d.)

The author explains in his foreword that this study is a part of the work required from one proceeding to the degree of Doctor of Philosophy in the Jagellonian University of Cracow, and he has selected as his subject the life work of Father Konarski, which he claims as a strong pillar in the reconstruction of modern Poland. The first part of Konarski's public life was largely political, and it was not till he was about forty years old that he appears to have turned seriously to educational reform. This took effect in the Collegium Nobilem at Warsaw by bringing fresh life and new ideals into that institution with a curriculum of the kind familiar to those acquainted with the Courtly Schools of the seventeenth century. How much Konarski owed to Locke, how much to Montaigne, is matter for conjecture, but he made free use of Comenius. Besides his ideas on the teaching of language, he practicalized his principles of instruction in laboratories and workshops, seeking by every means in his power to create an educated aristocracy who would be instrumental in the reconstruction of his country after the years so

disastrous to it, especially in the early eighteenth century. It is difficult to detect any far-reaching effects of Konarski's work outside his own land ; his name will be unknown to many professed students of educational history. Nevertheless, Mr. Rose's account is useful as the means of focussing the leading facts in the complicated history of Poland's lost opportunities in the seventeenth and eighteenth centuries. A.P.B.

Report of the Mental Deficiency Committee. (H.M.S.O.) Parts I, II, IV, 5s. net ; Part III, 1s. 6d. net.

This is the report of the Joint Committee of the Board of Education and Board of Control set up originally by the Board of Education in 1924, but early in 1925 an extension of its terms of reference to include adult defectives necessitated a dual controlling authority.

Part I is a general account of the problems to be faced, the nature of mental defect, a historical review of legislation relating to the mentally defective.

Part II deals with the mentally defective child, the administrative provisions for his care and education, the special problems of the Committee, its investigations and recommendations.

Part IV is a " Report on an Investigation into the Incidence of Mental Deficiency in Six Areas, 1925-27," by Dr. E. O. Lewis.

Part III deals with the adult defective.

The whole report is an extremely valuable production, and must be very carefully examined by all those who are interested in educational and social matters. The report merits a long and detailed review, but the reviewer's task is the better fulfilled by strongly recommending the books to all readers of this journal. Teachers and students will be particularly interested in the painstaking and illuminating researches of Dr. Lewis. Other readers will find much food for thought in Part III of the report.

A History of Science : by W. C. D. Dampier-Whetham. (Cambridge University Press. Pp. 514+xxi. 1929. 18s. net.)

The versatility of some writers is truly amazing. The author of this imposing volume is well known to students of physical science ; he has published works on social questions ; his previous works on the development of physical science have passed through several editions ; he has collaborated in the issue of a book on " The Literature of Science." Now this large and learned volume comes from his pen. He essays to trace the history of science from its beginnings in Babylon, through its many varieties and variations in many lands, and brings his story to an end with a reference to " Physical research in this year 1929." As though this was not sufficient to tax his strength to the uttermost he attempts the solution of the problem indicated by the sub-title of the book " and its relations with Philosophy and Religion."

Obviously, this Herculean task is beyond any man. But in aiming at the stars one may succeed in hitting the housetops. This author has indeed given to those of us who are interested in this subject the carefully gathered results of a long and diligent search in many fields. No one could be expected to pass equally competent judgments on all the issues raised, but the author has written a stimulating if provocative book, one which will find its way to the reference shelves of colleges and schools, and which will be often consulted by teachers of science who desire to lead their advanced pupils to realize the meaning and development of scientific thought.

Education in the United States : by Edgar W. Knight. (Ginn and Company. Pp. 588. 12s. 6d.)

The English reader may be put off this volume by its school-text form of the most extreme kind, with every page broken by heavily-led paragraph-headings, and every chapter preceded by a small-print summary of its contents, in numbered paragraphs. (Does the American student really profit by so much interposition between himself and the text, or is it only a publisher's tradition?) He may also be put off by the austerity of the first two chapters; the first consisting entirely of bare administrative facts and figures, the second of bare abstractions. But when once these obstacles are surmounted he will find an excellent history, full of human interest; tracing clearly the growth of present problems out of the past, and indicating the lines on which the author hopes for the growth of their solution. Professor Knight holds a post in the University of North Carolina, and special freshness is given to the work by the point of view of an enlightened Southerner, with his hopes for the New South. Outside America we have scarcely realized yet that "the Southern States are no longer poor." "With the enormous increase in economic wealth," says Professor Knight, "these States can now move forward in education if the danger of satisfaction with what they have already done can be averted." Good illustrations, especially portraits of educational leaders present and past, add to the value of the book. H.M.W.

National Institute for the Blind : Annual Report, 1928-29. (Pp. iv + 56. 1s. net.)

In reading through this very interesting report one is particularly struck by the great variety and wide scope of the work which is being done, especially in regard to the education and training for special work of the blind. Descriptions are given of each of the various centres which form part of the National Institute, including the Home for Blind Babies, the Chorley Wood College for Girls, the Massage School, etc. There is a very illuminating section devoted to the Braille Library and Publications Department of the Institute, describing the methods by which books, periodicals, and music are transcribed for the benefit of the blind. A very large amount of Braille literature is now available, and the Institute is most anxious to increase its output in this direction.

One feels, after reading the report, and noting its many interesting illustrations, that there are few spheres of life in which the blind cannot hold their own with their more fortunate fellow-men, so marvellous are the devices for overcoming their disability. The Research Departments of the Institute are in touch with many societies, including the National Institute of Industrial Psychology, for the greater perfection of their work, and we wish their efforts continued success in this magnificent undertaking.

A Survey of the Financial Aspects of Elementary Education : by J. Corlett, Ph.D., B.Sc. (Econ.). (P. S. King and Son. Pp. xi + 227. 10s. 6d.)

A very interesting review of the historical and present financial provisions of the State in the matter of elementary education! Mr. Corlett, in a short opening chapter, examines the general position in regard to the financing of semi-national services, including the difficulties that arise in the distributing of cost between the central and local authorities. The rest of the book is an examination of the subject as it applies to one particular service, namely, elementary education.

It is a mine of interesting and useful information, the discussion of block and percentage grants being particularly welcome. There is a foreword by Sir Percy Jackson, J.P., LL.D., Chairman of the West Riding Education Committee.

Memorandum on the Teaching of Modern Languages : issued by the Incorporated Association of Assistant Masters in Secondary Schools. Univ. of London Press, Ltd. Pp. 236. 4s.)

It is a most valuable service to the development of educational theory and practice when a picked group of experienced teachers get together and try to think out and express their fundamental aims and to advocate what they consider sound methods. The report before us is no exception, and is remarkably comprehensive and well-informed. It distinguishes carefully between work suitable for the picked pupils and for the non-linguistic pupils ; and it goes into detail as to the planning of the work for the first, second, third, fourth, and examination years. Finally, a useful chapter deals with testing and examinations.

With the broad conceptions of the work we are in close agreement, and we hope the book will be widely studied by teachers of foreign languages. It is surprising, however, that some at least of the admirable committee responsible for the report did not see that there were cut out of the opening chapter some of the crude expressions of antiquated and exploded psychology, which lead to unfortunate and untenable statements of aims (such as the "Training of Observation") which, happily, are not adhered to when the time comes for practical application. C.W.V.

Efficiency in Education : by J. C. Wright and Charles R. Allen. (Chapman and Hall, Ltd. Pp. 405. 15s.)

This is a curious book attempting to deal with ideas and ideals as though they were altogether capable of standardizing, classifying, and having given to them relative marks. Psychological implications are sometimes superficial. At the same time the book is of such an original type that it may prove stimulating and suggestive to the student. The title hardly suggests the breadth of the book, which deals with methods of teaching and planning of curricula as well as with administration.

The Problem of Time : by J. Alexander Gunn. (Allen and Unwin, Ltd. Pp. 460. 16s.)

This is a very comprehensive study of a problem that is very much to the fore in present-day philosophy. The treatment is historical, starting from the idea of time in Greek philosophy and passing through the periods of Newton, Kant, and Hegel, to modern physicists to contemporary metaphysicians. The last section includes a very useful exposition and criticism of the views of such important philosophers as Alexander, Whitehead, Bertrand Russell, and C. D. Broad.

A History of Modern Times : by D. M. Ketelbey, M.A. (Harrap. Pp. 623. 8s. 6d.)

A very successful attempt to give a popular account of events since 1789 ! Particularly noteworthy is the due proportion given to the Far East and U.S.A., while a chapter on "The World War and After," brings us right down to the Kellogg Pact.

The Europeanization of the world is separately described down to the end of the war, and the discussion of the chief features of the period 1871-1914 in a chapter entitled, "The Age of Armed Peace," also claims particular attention. There is a full abstract of chapter contents, itself a lesson in perspective and proportion, and there are many good maps and diagrams.

Modern Languages at Oxford, 1724-1929 : by Sir Charles Firth, D.Litt.
(Oxford University Press. Pp. vi + 151. 7s. 6d.)

This is a very useful addition to the history of modern studies. In the greater part of the book the question of organization, and especially of finance, occupies a considerable proportion of attention ; but the chapters on the foundation of the Honours School, and the Honours School before the war, contain some material of special interest, as exemplifying the extraordinary inertia and conservatism in educational movements.

The opposition to the Honours School of Modern Languages at Oxford, even at the end of the last century, is really astonishing, as are some of the reasons given by the opponents for the attitude they adopted, including the decline in fees that classical teachers would suffer if the reforms demanded were approved.

A Housemaster and his Boys : by One of Them. (Arnold. Pp. 120. 3s 6d.)
The title is misleading, for the author is a housemaster. He addresses himself mainly to parents, and works off a number of home truths that he could not offer by word of mouth ; the trouble is that the sort of parents here pilloried are unlikely to read this (or any other) book. The book is quite unpretentious ; but it contains much advice, based on wide experience, which other housemasters will doubtless find useful.

The Fundamentals of Human Motivation : by L. T. Trolande.
(Macmillan. Pp. 521. 21s. net.)

This is a very comprehensive work (one important aspect apart) starting from physiological and reflex bases, examining responses claimed by some as innate or instinctive ; discussing the mechanism of learning ; and the building up of complex responses and of " higher volitions." The author develops a theory of his own as to determination by the " summation " of all past affections, which is not, I think, as original as he seems to think it.

The aspect of the whole problem which I have suggested is unduly neglected is the study of tendencies in infancy and its bearing on the question as to how far actions called instinctive are really innate.

The Nursery Years : by Susan Isaacs, M.A. (Routledge and Sons, Ltd.
Pp. 76. 6d.)

A very useful introduction, for parents and nurses, to a serious study of infancy, based on a wide knowledge of modern psychology. The book is written in remarkably clear and non-technical language, and in the attractive style one expects from Mrs. Isaacs.

Rhythm and Metre : by Thomas Taig. (Cardiff : The Press Board of the University of Wales. Pp. 140. 5s.)

This is for its size a remarkably comprehensive study of rhythm and metre, with primary reference to verse, but revealing a realization of the contribution that musical analogies can make. The treatment also is on psychological lines, and in this Mr. Taig shows sound judgment, except that he makes at times, I think, an unduly harsh distinction between "sense" and "mind." The book is undoubtedly a valuable contribution to the subject treated. It is especially regrettable that, in a book appealing as it should to specialists in different departments of art and of science, there should be no index.

Romulus or the Future of the Child : by Robert T. Lewis. (Kegan Paul. Pp. 95. 2s. 6d.)

A suggestive book for parents who have the problem of handling the " pre-school child." But we hope they will not accept uncritically the assurance on the cover of the book that through it they can " qualify themselves to cope with the problems of this difficult period."

The Art of Arithmetic : by H. E. J. Curzon, M.A., D.Sc. Teachers' Books, I to VIII. (Nelson and Sons.)

This is a very useful series of books for use in schools, dealing with the teaching of arithmetic from the earliest stages. The teachers' books are ingeniously arranged, giving the exercises prescribed for pupils, with answers to oral and written tests (adjoining), together with an introduction in Book I and a lucid discussion of various points of method, historical development, etc., both there and in prefaces to other volumes. The publishers give no indication of the price ; the size of the books varies from 96 to 194 pages.

Living History. Book I : Jimmie's Story Book. Book II : A History of Homely Things. By J. J. Bell. (Philip and Son, Ltd. Pp. 120 and 154. 1s. 6d.)

This is a new way of teaching history to young children in the form of stories, each of which arises naturally out of some every-day event in a child's life. The stories are simple and interesting, and cover a wide range both in time and place. The idea is ingenious and psychologically sound, and has proved a great success when the reviewer used the books with her own small son.

At Home Among the Atoms : by James Kendall. (London, Geo. Bell and Sons. Pp. 270 + xi. 7s. 6d. net.)

The sub-title of this book is, "A First Book in Congenial Chemistry." The author, who is the Professor of Chemistry in the University of Edinburgh, has succeeded in writing a thoroughly human and interesting introduction to a very difficult subject, but has not sacrificed unduly the scientific accuracy by his very informal approach. There are some excellent illustrations in the book, and the general reader, after having enjoyed this volume, will look forward with eager anticipation to its suggested sequel.

The Origins and the Growth of Chemical Science : by J. E. Marsh. (London, John Murray. Pp. 161 + viii. 5s. net.)

The writer of this interesting little book emphasizes in his title and in his book the science as distinct from the art of chemistry. "There was no science of chemistry before the seventeenth century." Within the compass of this small book the author deals with "The Theory of Salt Formation," "The Fixation of Gases," and "The Atomic Theory with its Modern Developments." The author's view can be gathered from the quotation, "The oldest real chemical theory, the theory of salt formation, which is mainly responsible for the growth of chemical science as it exists to-day, still presents many problems which await solution."

The Art of Interrogation : by E. R. Hamilton. (Kegan Paul, 1929. Pp. xii + 174. 7s. 6d.)

This book is one of the International Library of Psychology, Philosophy, and Scientific Method Series, and is attractively produced.

It is also attractively written, though the bulk of it deals with a subject which is too often dull. Even the chapter whose title, "Measurement in Psychology," might suggest to non-specialists something too solid to be interesting, turns out to be very readable. The writer begins with a chapter descriptive of mind, in which he introduces his reader to some general principles. Then follow five chapters dealing particularly with mental tests and examinations, old and new. The last chapter deals with Questioning in the Classroom. The book as a whole is useful and interesting, and everybody in any way concerned with mental tests and examinations should certainly read it.

A Survey of Ancient History : by M. L. W. Laistner. (Heath and Co. Pp. xiii+613. 10s. 6d.)

A useful text-book for senior pupils in schools, or students at college. Most of the book deals with Greek and Roman history, but earlier civilizations are not ignored.

The Greek City and its Institutions : by Gustave Glotz. (Kegan Paul. Pp. xx+416. 16s.)

This work by the professor of Greek history at the University of Paris is a scholarly production : the treatment is on broad lines, dealing not only with the development of political institutions, but with political and social ideas.

An Elementary Commentary on the English Law : by His Honour Judge Ruegg, K.C. (George Allen and Unwin, Ltd. Pp. viii+194. 7s. 6d.)

We welcome a book which will encourage the study of law in the upper classes of secondary schools. For what study can so combine a "training in reasoning," so far as that can be given by one subject, with practical utility and the possibility of a permanent intellectual interest. We regret, however, the packing of too many facts into this first book of law, and the arrangement of the text accentuates the appearance of scrappiness.

Africa : by L. S. Suggate. (Harrap. Pp. 378. 6s.)

This book is written by one who has studied both geography and the method of teaching it. It is a comprehensive study, packed with information of value with due attention to economic aspects, and well supplied with illustrations and diagrams.

The School Drama in England : by T. H. Vail Motter. (Longmans. Pp. xiv+325. 15s.)

A historical and entirely original study of a most interesting topic, showing that the school play is no new thing.

Everyday Things in Homeric Greece : by M. and C. H. B. Quennell. (B. T. Batsford, Ltd. Pp. viii+140. 7s. 6d.)

Those who know that excellent book by the same authors, namely, "A History of Everyday Things in England," will turn with pleasure to this new work. It should prove a valuable help to the beginning of the study of early Greek civilization.

The Measurement of Progress : A Study of Term Examinations : by W. J. Stainer, B.A., F.C.S. (George Harrap and Co., Ltd. Pp. 107. 5s.)

This book is by a kind of investigator of peculiar value for the advancement of the study of educational problems, namely, an experienced head master with a taste and capacity for statistical enquiry. The treatment here is very lucid and non-technical, and the book ought to be available for every school staff.
C.W.V.

Visual Instruction in the Public Schools : by A. V. Dorris. (Ginn and Co., Ltd. Pp. 481. 11s. 6d.)

Visual aids to studies of all kinds, scientific, social, geographical, etc., are discussed and exemplified admirably in this book. The basis of grouping of material is a questionable one, but if one grants that, the book is a good example of what can be done along such lines.

NOTICES OF FOREIGN JOURNALS.

Zeitschrift für Pädagogische Psychologie. (Leipzig. May, 1929.)

W. ILLGE : *Beiträge zur religiösen Werterlebnisfähigkeit des Grundschulkind.* A study of the inner life of elementary school children by a teacher of sympathy and insight who is trying to find out what voluntary actions the child is capable of under the impress of received religion. The exploration is an inquiry into facts of mind represented in the written or oral expressions of nine-year-old children, for instance an essay "Als ich mal an den lieben Gott dachte," brought reports of hospitals, accidents, family illness, conversations with grandmother, fear of detection and punishment, thunderstorms, funerals, beautiful landscape, accidents to animals, temptations to steal chocolate, dreams, etc. Two sorts of religion must be distinguished at this age, a religion of experience based on personal insufficiency and a religion of imagination clothing itself in poetic imagery taken from the visible world, but working through feelings of hope and fear and issuing in action.

Zeitschrift für Pädagogische Psychologie, June, 1929, contains among other papers H. VOIGTS : *Psychologische Untersuchungen über die Wirkung des Seeklimas, insbesondere der Ostsee, auf Jugendliche.*

This is an attempt at an exact inquiry on the influence of seaside climate on young people. The observations were made at Travemünde on the Baltic. Children came in groups of 80 to 100, boys and girls from all parts of Germany. Each party stayed six weeks. About a dozen cases in each party were tested ; observation, mental calculation, and dexterity tests were applied. Attempts were made to measure the psychological influences of sea-bathing, of sun-bathing, of forest life, of institution life as compared with home-life. Children who stayed at home in Lübeck afforded a control. Tentative results were that sea-bathing raised psycho-motorexcitability but simultaneously depressed attention, thus tiring the apperceptive functions. Whilst alpine sunbath is reported as refreshing, in warm and damp lowland air sunbath is relaxing. In July and August continued sunbath led to sleepiness and headache. North Sea and Baltic differ in their effects. The best results were in April, May, and in October. Strong wind proved tiring. The North Sea is almost too stimulating for nervous children, the Baltic with its possible combination of sea-shore and woodland more restful, but both are good.

PUBLICATIONS ALSO RECEIVED.

ENGLISH.

The Last Essays of Elia : by Charles Lamb. (Oxford Univ. Press. Pp. xix+234. 3s. 6d.)

Studies in English : Part II, Literature : by William Robb. (Longmans. Pp. viii+219. 3s.)

A Literary History of England : by Bernard Groom. (Longmans. Pp. xi+393. 6s.)

Politics and Literature : by G. D. H. Cole. (Hogarth Press. Pp. 160. 3s. 6d.)

A Commentary on Prose and Verse Speaking : by A. Drew and Barry Robinson. (Harrop. Pp. 146. 3s.)

Notes on English Verse Satire : by Humbert Wolfe. (Hogarth Press. Pp. 158. 3s. 6d.)

A First Book about Chaucer : by Dorothy Martin. (Routledge. Pp. vii+120. 2s.)

A Reciter's Second Treasury of Verse : edited by Ernest Guy Pertwee. (Routledge. Pp. 252. 3s. 6d.)

Twenty-two Story Poems : edited by E. E. Reynolds. (Harrap. Pp. 218. 2s.)

BOOK REVIEWS

HISTORY.

- European History, 1713-1914 :** by Christopher Hollis. (Macmillan Pp. xix+370. 4s. 6d.)
An Introduction to Mediæval History : by D. Dymond. (Methuen. Pp. xix+332. 6s.)
Pioneers of Progress : by C. S. S. Higham, M.A. (Longmans, Green, and Co. Pp. xii+180. 2s. 6d.)
Great Men of History : by D. M. Gill M.A. (Harrap. Pp. 192. 2s.)

GEOGRAPHY.

- The Nations of Europe :** by E. J. G. Bradford. (Harrap. Pp. 224. 2s. 6d.)
Cambridge School Geographies : III, The Homeland : by E. D. Laborde. (Cambridge Univ. Press. Pp. 120. 1s. 9d.)

MATHEMATICS.

- A School Geometry :** by A. Walker and G. P. McNicol. (Longmans. Pp. vii+492. 5s.)
An Introduction to the Study of Map Projections : by J. A. Steers. (Univ. of London Press. Pp. xxvii+204. 8s. 6d.)

SCIENCE.

- Modern Physics :** by C. E. Dull. (Harrap. Pp. viii+778. 6s. 6d.)
Examples in Elementary Physics : by S. R. Humby and F. W. Goddard (Longmans, Pp. viii+165. 2s. 6d.)
An Introduction to Science : by P. E. Andrews and H. G. Lambert (Longmans. Pp. x+148. 2s. 6d.)
Modern Science : by J. Arthur Thomson. (Methuen. Pp. xi+210. 3s. 6d.)
Nature Study in the School : by Vilhelm Rasmussen. (Glydendal. Pp. viii+253. 5s.)

RELIGION.

- The Christian Religion, Its Origin and Progress.** Volume I : **The Rise of the Christian Church.** Part I : **The Jewish People and their Faith :** by L. Elliott Binns, D.D. (pp. x+125). Part II : **The Earliest Christian Church :** by J. W. Hunkin, B.D. (pp. xii+123). Part III : **Early Traditions about Jesus :** by J. F. Bethune-Baker, D.D. (pp. x+123). (Cambridge Univ. Press. 2s. 6d. each.)
The Religions of Mankind : by S. M. E. Trood. (Christophers. Pp. 159. 2s. 6d.)

MISCELLANEOUS.

- Business Economics :** by Thomas Beach and Douglas H. Smith. (Routledge. Pp. x+239. 3s. 6d.)
The Northern Saga : by E. E. Kellett. (Hogarth Press. Pp. 205. 7s. 7d.)
Greek Medicine : by A. J. Brock. (Dent and Sons. Pp. xii+256. 5s.)
The Tale that had no Ending, and Other Stories : by Elizabeth Clark. (Univ. of London Press. Pp. 184. 3s. 6d.)
The Little One in Between : by Marion St. John Webb. (Harrap. Pp. 60. 3s. 6d.)
Tales out of School : by Helen Sinclair. (Angus and Robertson, Sydney. Pp. iii+205. 5s.)
League of Nations : Educational Survey (League of Nations Secretariat. Pp. 152. 2s.)

The Forum of Education.

VOL. VIII, No. 2

June, 1930.

An Enquiry as to the Reasons for the Choice of Occupations among Secondary School Pupils.

PART II.

BY F. M. RITCHIE (Mrs. Austin).

C.—THE INFLUENCE OF A FAVOURITE SCHOOL SUBJECT.

Twenty-four per cent.* of the girls give the liking of a school subject as a main reason for their choice, and no doubt in some cases it is one of the best of reasons, for though, for example, enthusiasm and ability for a subject are no sure guarantee of success in teaching it, they are of enormous importance.

Sometimes, however, this influence as a deciding factor is too strong†, as when a girl desires to become a dispenser because "science" is her best subject; when others decide to try to become authoresses or journalists because their teachers say they are good at composition; or when still others wish to become drapery shop assistants or to go into an office because they like arithmetic and "like solving equations in algebra"!

Occasionally, even when the love of a subject is a strong urge, difficulties are realized and considered.

"Molly Cule," age 16½ years, writes:

"It is just as easy to say 'I have decided to be a millionairess' as to say 'I have decided to be a teacher of Chemistry.' However, a year ago I decided that teaching chemistry would suit me better than anything else. Insufficient printed regulations and agreements had been read to me at that time to make me realize that it would be less simple to effect my decision than to make it."

* Compared with 32 per cent. of the boys.

† This was even more striking in the boys' papers.

The relative number of times different school subjects are preferred is interesting. Of the 70 girls who mention them as an influence in deciding on a career 15 mention mathematics, 15 foreign languages, 11 games, 9 science, 7 drawing and art, 3 history, 3 dancing, 2 English, 2 cookery, and 1 each acting, music, dressmaking.

In view of popular notions as to the suitability of classics and mathematics as subjects for girls it is surprising to notice the enthusiasm with which they are mentioned. One says: "My favourite subject is Latin"; another, "I like Latin very much, and should be sorry if I had to give it up"; a third, "I have decided that I should like to teach Latin and Greek as I have a passion for languages."

Mathematics seems to be the most popular subject in this school. Again and again we find such expressions as "I am interested in any mathematics"; "I am very fond of mathematics"; "I can understand mathematics more easily than any other subject"; or to quote more fully, "*Snowdrop*," age 15 years 8 months, writes:

"I should like to take up mathematics and study it more in detail than is possible in school. I enjoy doing problems in arithmetic, algebra, geometry, and trigonometry, and it is surprising to find that the easiest problems can be so wrapped up that they appear difficult."

Only one girl (already quoted)* asks for a job with "very little arithmetic," and only one says she dislikes Latin.

"*Carolina B.*" Age 14 years 8 months.

"I do not like Latin because the rules are too confusing."

This girl is quoted more fully later (page 83) as she is unique amongst these girls in her enthusiastically expressed preference for domestic work.

The way in which success in school work influenced one girl is shown by "*Barbara*," who writes:

"When I was quite small I used to think that I should like to be an author, but since then my ideas have altered a little. My mistress used to tell me, at the elementary school, that my compositions were not bad. This made me rather proud and I wrote a poem and a few short fairy stories which were accepted. When I left this school and went to the secondary school, languages became my favourite study and made me think of becoming a foreign correspondent. In any case I mean to pass my matriculation, and if I decide on the latter trade go to Pitman's, in London, to 'finish off.' Mother seems in favour of this and I think after all I am not quite clever enough to be an author."

* See Forum of Education, Vol. VIII, No. 1. P. 48.

And here the triple influence of teacher, subject, and home is shown by "*Biddy*," who wishes to be a history mistress:

"I have always loved the subject. At the first school I went to, the history teacher was my best friend. When I came here I found that the history mistress was also very interesting and very nice. In the summer of 1926 I went to Chester, an interesting old place that I adore. My father is interested in history, and he allowed me to visit all the old buildings . . . This year . . . I saw Glastonbury Abbey Ruins, Wells Cathedral, and Cheddar Caves. I went in for three competitions at my Sunday School, and passed each with honours. They were on 'Oliver Cromwell,' 'Martin Luther,' and 'In Great Company.' The lady who took us is M.A., and intends to be a history teacher. I love the subject and who could help doing so in my place."

"*Carolina B.*," age 14 years 8 months, has already been mentioned as disliking Latin. She wishes to become a domestic science teacher, and writes:

"I like doing practical work. I like cookery better than needlework because there is no fixing to be done, and if anything goes wrong with the cakes or puddings which are being made, the faults are more easy to put right than if a large piece of material is cut out in the wrong place. I was always interested in experiments and I still like to try things on my own. I think all branches of domestic science are useful because there is generally something to be seen after a certain time has been spent. It is quite possible to prepare an ordinary dinner in $2\frac{1}{2}$ hours, but after working for $2\frac{1}{2}$ hours at mathematics there are only several answers of sums to show, and then nobody can say that they will be of any use. There is only a certain interest in doing mathematics, but it soon goes because the only way of making any variation is to alter the figures because the rules are just the same. English composition is interesting because you can write all your thoughts, but what you imagine does not help anyone else except to form some means of recreation. I do not like Latin because the rules are too confusing, and although I like French I would not like to teach it. I think history is rather a waste of time unless one thinks of becoming a Member of Parliament or a barrister. I do not think that anyone really influenced my choice because I usually think a lot about my ideas and I am not in the habit of telling anybody anything until I have really made up my mind . . . I think I am fitted to a certain extent because the occupation requires a certain amount of common-sense, which I think I possess."

D.—ENTHUSIASMS AND AMBITIONS OF ADOLESCENCE.

There are many examples of this. They illustrate the extreme candour of many of the girls when writing anonymously, and they throw light on the qualities in vocations which are likely to appeal to adolescents, and on motives which are likely to be of great influence in the choice of vocation. Some express a desire for adventure, others show generous impulses awaiting direction in service to others, and ambitions which in the absence of careful guidance may lead to bitter disappointment and disillusionment.

Desire for Adventure.

In most cases this takes the form of a desire to travel and explore, and many answers like the one quoted below, suggest pent-up energy waiting to burst out in adventure of almost any kind if unguided into socially desirable channels.

"Sudrae," age 15½ years, hopes to be an adventurer and to travel everywhere some day. In the meantime she will try to be "a real live newspaper woman." She writes :

"I feel that I want to be ever so busy and have to work ever so hard when I leave school. There are some people who think that reporting is not much of a job for a girl. I think that they are narrow-minded. Just think what a lovely time I should have. No being cooped up in a mouldy office . . . I hope that I shall be on the move all the while . . . The work of a reporter is particularly strenuous and as I am strong I think I could do it."

Generous Impulses urging Service to Others.

It is in this group that most of the cases of adolescent enthusiasm occur, potential nurses, doctors, dispensers, and teachers longing to help others, and to ease suffering, particularly that of little children. Thus :

(a) "*Cinderella*." Age 16.

"When I grow up I should like to be a nurse. My mother was a nurse in a children's hospital before she was married, and she used to tell me about the dreadful pain that some children have to suffer. She used to say to me sometimes that she would like me to do what I wanted when the time came to support myself, but she hoped I should give nursing my very serious consideration. I have not yet decided what I shall do because my guardian wants me to teach, but I feel that I would rather attend to the physical troubles of children because no one can

learn properly if their body is in any pain. I have also been influenced by a nurse at a cripples' home which I pass every day. She says that the poor children have no excitement or joy except when I wave to them from the tramcar."

(b) "*Mary Jones!*" Age 16 years. *Teacher.*

" . . . Most of my leisure time was spent in thinking of my ideals and what I was really working for. Why were there teachers? What were their main objects in life? Why be a teacher? Why go to school at all? And at last the necessity of education dawned upon my horizon. From this time forth I decided that in no way could I serve my country and fellow men in any better way than by spreading education . . . My school friends laughed at me, but they did not influence me in the slightest . . . the aims are good and there is the satisfaction that you have achieved something."

(c) "*Rebecca Prim.*" Age 15 years. *Doctor, Nurse or Missionary.*

"Because both can do so much to help the sick and poor people. They also are able to save the lives of many people by their skill. I should like to be able to relieve people of their pain and restore them to good health again . . . If I could not be a doctor I should like to be a missionary. Because there are so many natives in India, Africa, etc., that are uncivilized and need help."

Several girls want to repay their mothers and give them comforts in advanced years.

(a) "*Lorna.*" Age 16½ years, would like to do commercial work, but has now decided to be a kindergarten teacher :

"This decision has been due to my mother's influence to a great extent. My sister and I have totally different natures. I have always been a 'home-bird' and she is a butterfly, and mother thinks that if I can make a good position for myself, and after all it is a good position for a girl, I shall be able to give her comforts in her advanced years."

(b) "*Lilian.*" Age 12 years. *Private Secretary.*

"I should like to be a private secretary because the money is good, and I want to try and repay mother for what she is doing for me now as I haven't a father, and it is a great expense to her to send me to the secondary school."

The following from "*June Rover*," aged 13 years, shows a mixture of the love of adventure and the desire to do good. It also illustrates the ease with which the sympathies of some of these girls are aroused.

" I should like to be a missionary. To travel in far-off countries and to see wonderful animals and insects and birds. I am undecided about it as yet. I have longed to do so ever since a black man came to Sunday School and told us how the missionaries were helping his people by putting up schools for the children and helping them to have a trial before things are decided against the people. By curing them from illness, by medicine not by putting blankets and things round them. If I became a missionary I should like to go to Russia or Africa. Because in Africa you can see wonderful birds and animals but in Russia there are about 3,000 deserted children, and sometimes when you go a walk down a road in Russia, these children will rush out and rob you. If you do not give up your things readily they will kill you. A Russian lady came to Sunday School and told us all about it. So I think I should like to go to Russia better than Africa because it seems so dreadful for children to kill people although they do not know it is wrong."

High Ambitions.

This shows most often in combination with generous impulses urging service to others, but one example may be given.

" *Kathleen S.*" Age 18½ years.

"Although my career thus far is undecided, it is my ambition to be a film producer. It will be an ambition hard to realize but if I succeed I believe I shall not be the only woman film producer. My reasons for this desire are not wholly mercenary, however, for in my opinion the film has almost as much power for good, if properly used, as the newspaper. People will go to see films when they will not or cannot read books and if they can be brought to appreciate the classic books on the cinematograph perhaps they will read them. There are untold possibilities in films and it would be my ambition to cut clean away from the American style of film, unnecessarily expensive and dealing too much with money and sex, and make films typically English yet enjoyed internationally. My greatest desire is to make people realize that films can be art as well as commerce and that art should be the main factor. Half a million pounds spent on a film should not draw people as it apparently does. This is doubtless a very idealistic ambition but I hope it will be realized, at least in part."

A brief consideration of the results of Part II follows.

PART II.

ANALYSIS OF MOTIVES.

In the second part of the enquiry the girls selected the motives which had influenced them most from a list of 15 written on the board.

The girls asked for certain reasons to be added to the list given to them. Omitting a few additions which occurred in the papers only once or twice each, the added reasons were :

| | |
|--|-----------|
| Friends in the Profession mentioned by | 46 girls. |
| Philanthropic | „ „ 18 „ |
| Continue Education | „ „ 15 „ |
| Non-Monotonous | „ „ 15 „ |
| Sister's Occupation | „ „ 15 „ |

It is interesting that of the 18 girls who gave " philanthropic " as an influence, 14 were in the higher forms (VI, V, and IV) and also that of the 15 who gave " desire to continue education," 11 were in the sixth form, in which there were 18 girls altogether.

" Friends in the Profession " is mentioned rather more frequently in the lower than in the upper forms.

Table II. gives the order of frequency of the most frequently mentioned motives. The boys' table is given for comparison.

TABLE II.
FOR GIRLS.

| <i>Motive.</i> | <i>Times mentioned.</i> | <i>Percentage.</i> |
|---------------------------------------|-------------------------|--------------------|
| No. 10. (Would like the work) | 195 | 67 |
| No. 4. (Well paid) | 163 | 56 |
| No. 5. (Secure)..... | 136 | 47 |
| No. 2. (Mother's wish) | 121 | 41 |
| No. 14. (Prospects of advancement) | 115 | 39 |
| No. 15. (Skill rather than labour) .. | 100 | 34 |

FOR BOYS.

| <i>Motive.</i> | <i>Times mentioned.</i> | <i>Percentage.</i> |
|--------------------------------------|-------------------------|--------------------|
| No. 10. (Would like the work) | 247 | 90 |
| No. 4. (Well paid) | 174 | 63 |
| No. 5. (Secure)..... | 154 | 56 |
| No. 6. (Feels specially fitted) | 150 | 54 |
| No. 1. (Father's wish) | 141 | 51 |
| No. 2. (Mother's wish) | 108 | 39 |

It will be noticed :

(a) That the three reasons given oftenest are the same for both boys and girls.

(b) That the girls give higher places than the boys to the motives "skill rather than labour," "prospects of advancement," and "mother's wish."

(c) That the boys give higher places than the girls to "father's wish" and "feel specially fitted."

The following table shows the order given by boys and girls to the reasons most often mentioned by either boys or girls.

TABLE IIA.

| <i>Reasons.</i> | | | <i>Order of influence given by</i> | |
|-----------------|----------------------------|-------|------------------------------------|--------------|
| | | | <i>Girls.</i> | <i>Boys.</i> |
| Reason No. 1. | (Father's wish) | ..... | 9th | 5th |
| „ No. 2. | (Mother's wish) | ..... | 4th | 6th |
| „ No. 4. | (Well paid) | ..... | 2nd | 2nd |
| „ No. 5. | (Secure) | ..... | 3rd | 3rd |
| „ No. 6. | (Feels specially fitted) | ..... | 8th | 4th |
| „ No. 10. | (Would like the work) | ..... | 1st | 1st |
| „ No. 14. | (Prospects of advancement) | ..... | 5th | 10th |
| „ No. 15. | (Skill rather than labour) | ..... | 6th | 13th |

INFLUENCE OF PARENTS AND TEACHERS.

About this only two general conclusions can be drawn with certainty from the girls' papers :

(a) The teacher's wish is in no form mentioned as often as that of either parent.

(b) The mother's wish is mentioned oftener than the father's in every form except the sixth (18 girls only) where the father's wish is mentioned 12 times and the mother's 10 times.

THE LIGHTER SIDE OF THE ENQUIRY.

The investigator reading through the papers of these girls tends to become depressed at the thought of the ability, power, and fervour apparently in danger of being misdirected. But throughout, the spontaneity and candour are refreshing, and here and there come cheering gleams of humour, conscious and unconscious. Here for example is a girl of thirteen with "distantly French relations" who hopes to become a foreign correspondent but confides in us that she would really rather be a mannequin because she "likes wearing beautiful dresses and likes to be admired." Another, aged

14, tells us that she would like to be a children's nurse, but it must be in an important family as that would give her a splendid opportunity to "observe their customs."

A kind of twisted logic sometimes appears as when a girl writes: "To be a teacher you must be clever. I should like to be clever so I shall be a teacher."

Finally, the fifteen-year-old girl who refers to nursing as "a needy profession" was referring to the work done by nurses, and to the need for them, not to the remuneration.

SUMMARY OF MAIN RESULTS AND CONCLUSIONS.

(1) A general classification of the papers indicates that the proportion of the senior girls choosing their occupation for wrong or inadequate reasons, or at least having themselves a very inadequate idea of the reason why a given occupation was chosen for them, is even greater than it was for the boys, namely four-fifths compared with one-half.

(2) That the nature of the replies is not merely dependent on the intelligence or degree of education of the girls is suggested by the fact that compared with the junior girls a greater percentage of the seniors (over 14 years) give trivial reasons or side issues as a main influence (16 per cent. in Forms VI and V, and 12 per cent. in the lower forms).

It is suggested that the senior girls may have sought by an array of trivial reasons to justify or explain a choice made unavoidable by circumstances, or made for them by others.

(3) Some decisions even among the older girls are partly made on entirely erroneous ideas which could be readily dispersed by a well-informed adviser.

(4) The ease of getting a job, or the actual offer of one, which was an influential motive with many of the boys, apparently does not weigh as heavily with the girls. It is possible that this is an apparent rather than a real difference.*

(5) Trivial motives, which may exercise a strong appeal at the moment, but which are often of no value as permanent grounds for choice, occur even among the oldest girls. Not only so, but they are more common among the senior than among the junior girls. (See 2 above.)

The percentage for all the girls is 14 per cent. compared with 6 per cent. for the boys. A possible explanation has been suggested.†

* See *Forum of Education*, Vol. VIII, No. 1. P. 50. † *Ibid*, pp. 53 and 54.

(6) Mention of the "respectability" motive is rare. When it occurs it takes the forms of admiration for "refinement," desire to associate with cultured people, and a desire for good company and good clothes. The parents are sometimes quoted as desiring their girls to have the best possible chances so that they may not be "looked down upon." The teaching profession is referred to as "a superior profession."

(7) More than one-fifth of the girls spontaneously give as a main motive one of the three types of "superficial" reasons given here under (4), (5, and (6), apart from reasons based upon erroneous ideas. Far the largest percentage comes under the "trivial or irrelevant" heading. (See (5) above.)

(8) With about one-quarter of the girls (compared with one-third of the boys) there is an intimate connection between their liking for a school subject and their choice of an occupation with which it is closely connected, or for which they think it fits them. In some cases it is evident that the liking for or excellence in a given school subject is misleading as a guide to a choice of occupation.

(9) The enquiry affords a number of illustrations of the influence of adolescent enthusiasm and altruism on the choice of a profession. High ambitions and love of adventure are less commonly expressed than they were by the boys. On the other hand expressions of altruistic longings to help others and do good in the world are more common.

(10) In every form both the wish of the father and the wish of the mother are mentioned more often than the wish or suggestion of the teacher, which is rarely mentioned, though more often by the girls than by the boys (15 per cent. compared with 10 per cent.)

(11) The mother's wish is mentioned oftener than the father's wish in every form except the sixth, where the father's wish is mentioned 12 times and the mother's 10 times each out of a possible 18.

The Demands for Subject Specialisation and Combinations of Subjects in Secondary Schools in 1929.

BY ARTHUR PINSENT.

PROBLEMS frequently arise in University Education Departments concerning the advice which should be given to prospective teachers on their entry into college and during their academic years, about suitable schemes of courses for their degrees. The need for advice is shown very clearly when students enter a training department in their fourth year, having completed a degree scheme, and having pursued a subject to the honours stage which is practically valueless as a qualification for teaching in a normal secondary or "modern" school. Such students find it difficult to get posts which are adequate (in their estimation) to their academic status. The difficulty of giving advice is felt in times of a change of fashion in curricula. For example, there is a tendency at present to encourage the teaching of biological subjects as part of the science courses in boys' as well as girls' schools, but the number of schools actually adopting the change is not great, and the rate of change is not particularly rapid. One hesitates, therefore, to advise men students to take a science course strongly biassed toward the biological side.

With such difficulties as these in mind a survey of the requirements of schools and the opinions of heads of secondary and central schools in Wales was undertaken about two years ago.* The results aroused some interest and considerable discussion amongst my colleagues, and two objections were raised. It was pointed out that the survey covered Wales only, and therefore had no more than a local significance. It was also urged that changes were taking place in the schools which might quickly make the results out-of-date. I, therefore, decided to make another analysis of a much wider sample by a different method. The first analysis was based upon the replies of heads of schools to a questionnaire somewhat similar in scope to that reported in this journal (Vol. III, June, 1925, p. 97). The present results were obtained by the analysis of all the advertisements which appeared in the *Times Educational Supplement* from

* A full report of this survey was published in the "Aberystwyth Studies," Vol. XI, 1929.

the first number in January to the last number in December, 1929. These advertisements are issued from all sorts of institutions for secondary education, including public and private schools ; grammar and municipal secondary schools ; technical colleges ; junior technical, trade, and commercial schools. They may, therefore, be taken as a representative sample of the general secondary school demands in England. Advertisements from Welsh schools are included, but for the purpose of this survey no notice was taken of advertisements from Scotch or Colonial schools.

This method has one distinct advantage over the questionnaire in that it shows the proportions of masters and mistresses demanded during the period, and the qualifications desired for them.

The questions about which some facts are desirable in connection with this problem of advice are such as the following :

- (a) What proportion of posts in each subject were offered to masters and mistresses ;
- (b) What main subjects and combinations of subjects were most and least frequently asked for ;
- (c) What demand is there in the secondary schools for general form work, including the teaching of three or four subjects to the junior or middle forms ;
- (d) What combinations of subjects, including languages, are most frequently demanded ;
- (e) What is the opportunity for men students in the biological sciences, etc.

RESULTS.

The following abbreviations are used : Ma.—Master ; Mi.—Mistress ; N.S.—Sex of teacher not specified.

In certain cases the advertisements were not quite precise. A selection of subsidiary subjects was offered, e.g., Latin with any two of the following, English, French, History, Mathematics. In cases like this all the possible combinations of subjects which would fulfil the conditions have been included. In estimating the number of posts offered this has been offset by the exclusion of advertisements which demanded two or more teachers to take

between them a given number of subjects. It will be seen, therefore, that the number of cases included in the analysis is not exactly equal to the number of posts offered, but the actual difference is not great. Altogether 1,854 combinations of subjects were included. The accessory subjects, Physical Training, Needlework, Drawing, Handwork, were included only when required in combination with academic subjects.

A.—DISTRIBUTION AND FREQUENCY OF SUBJECTS.

Table I shows the number of subjects demanded of each teacher. For the sake of comparison the corresponding figures from the English* and Welsh† surveys already noted have been included. Table II shows the same results expressed in terms of the percentages of teachers of each sex listed in the returns. In calculating the proportions in Table II it has been assumed that the teachers required for the posts in which the sex was not specified would be divided in the same ratio as is indicated in columns 1 and 2 of the table.

From Table II it would appear that a slightly greater proportion of mistresses than masters take single subjects, or combinations of one main and one subsidiary subject. More masters than mistresses were required for combinations of two main subjects. The Welsh survey indicated that specialisation was greatest in the girls' schools. The proportion of teachers required for two subjects only, whether two main, or one main and one subsidiary, is greater than that indicated in the two previous surveys. It is possible that there is a significant increase in the demand for these qualifications, but further results are needed to confirm this. The figures for three subject posts in this table are probably too low. It is likely that a number of the teachers required for general form work would be required to teach three subjects to the lower and middle forms. All three surveys show that at least 75 per cent. of the teachers in the schools concerned taught one or two subjects only.

*This journal, June, 1925, p. 97.

†"Aberystwyth Studies," Vol. XI, p. 53.

SUBJECTS IN SECONDARY SCHOOLS

TABLE I.

SHOWING NUMBER OF TEACHERS REQUIRED FOR ONE, TWO, THREE OR MORE SUBJECTS, WITH CORRESPONDING FIGURES FROM THE TWO OTHER SURVEYS MENTIONED IN THE TEXT.

| <i>No. of Subjects.</i> | <i>Ma.*</i> | <i>Mi.*</i> | <i>N.S.*</i> | <i>Total.</i> | <i>Welsh Survey.</i> | <i>English Survey.</i> |
|----------------------------|-------------|-------------|--------------|---------------|----------------------|------------------------|
| One subject | 268 | 372 | 31 | 671 | 394 | 408 |
| Two subjects : | | | | | | |
| One main, one subsidiary | 226 | 309 | 22 | 557 | | |
| Two main | 134 | 114 | 14 | 262 | | |
| | 360 | 423 | 36 | 819 | 387 | 385 |
| Three subjects : | | | | | | |
| One main, two subsidiary | 42 | 53 | 3 | 98 | | |
| Two main, one subsidiary | 28 | 28 | 3 | 59 | | |
| Three main | 26 | 22 | 3 | 51 | | |
| | 96 | 103 | 9 | 208 | 208 | 161 |
| Four subjects : | | | | | | |
| One main, three subsidiary | 10 | 15 | 2 | 27 | | |
| Two main, two subsidiary | 10 | 3 | — | 13 | | |
| Three main, one subsidiary | 4 | 3 | — | 7 | | |
| Four main | — | 3 | 1 | 4 | | |
| | 24 | 24 | 3 | 51 | | |
| General form work | 42 | 60 | 3 | 105 | | |
| | 66 | 84 | 6 | 156 | 62 | 88 |
| Total | 790 | 982 | 82 | 1854 | 1051 | 1042 |

TABLE II.

SHOWING THE ABOVE RESULTS IN PERCENTAGES OF TEACHERS ENGAGED

| <i>No. of Subjects.</i> | <i>Ma.*</i> | <i>Mi.*</i> | <i>Total.</i> | <i>Welsh Survey.</i> | <i>English Survey.</i> |
|-----------------------------|------------------|------------------|------------------|----------------------|------------------------|
| | <i>per cent.</i> | <i>per cent.</i> | <i>per cent.</i> | <i>per cent.</i> | <i>per cent.</i> |
| One subject | 34 | 38 | 36 | 37 | 39 |
| Two subjects : | | | | | |
| One main, one subsidiary .. | 29 | 31 | | | |
| Two main | 17 | 12 | | | |
| | 46 | 43 | 44 | 37 | 37 |
| Three subjects : | | | | | |
| One main, two subsidiary .. | 5 | 5 | | | |
| Two main, one subsidiary .. | 4 | 3 | | | |
| Three main | 3 | 2 | | | |
| | 12 | 10 | 11 | 20 | 15 |
| Four subjects (total) | 3 | 3 | 3 | | |
| General form work | 5 | 6 | 6 | | |
| | 8 | 9 | 9 | 6 | 8 |

* Ma.=Master ; Mi.=Mistress ; N.S.=Sex of Teacher not specified.

SHOWING THE FREQUENCY OF THE DEMANDS FOR MAIN SUBJECTS, EITHER ALONE OR IN COMBINATION WITH ONE OR MORE SUBSIDIARIES.

SUBJECTS IN SECONDARY SCHOOLS

| Subject. | Alone. | | | | With One Subsidiary. | | | | With Two Subsidiaries. | | | | With more than Two Subsidiaries. | | | | Totals. | | | |
|------------------------|--------|-----|------|-------|----------------------|-----|------|-------|------------------------|-----|------|-------|----------------------------------|-----|------|-------|---------|-----|------|-------|
| | Ma. | Mi. | N.S. | Tot'l | Ma. | Mi. | N.S. | Tot'l | Ma. | Mi. | N.S. | Tot'l | Ma. | Mi. | N.S. | Tot'l | Ma. | Mi. | N.S. | Tot'l |
| French .. | 35 | 72 | 7 | 114 | 45 | 57 | 3 | 105 | 9 | 7 | — | 16 | 3 | — | — | 3 | 92 | 136 | 10 | 238 |
| English .. | 30 | 68 | 5 | 103 | 40 | 54 | 8 | 102 | 2 | 5 | — | 7 | 2 | 5 | 1 | 8 | 74 | 132 | 14 | 220 |
| Classics .. | 22 | 30 | — | 52 | 6 | 7 | 2 | 15 | 1 | 1 | — | 2 | — | — | — | — | 29 | 38 | 2 | 69 |
| Latin .. | 15 | 7 | — | 22 | 15 | 23 | 1 | 39 | 4 | 2 | — | 6 | — | 1 | — | 1 | 34 | 33 | 1 | 68 |
| German .. | 4 | 1 | 1 | 6 | 15 | 3 | 1 | 19 | — | 1 | 1 | 2 | 1 | — | — | 1 | 20 | 5 | 3 | 28 |
| Welsh .. | 1 | 1 | — | 2 | 2 | 2 | — | 4 | — | 1 | — | 1 | — | — | — | — | 3 | 4 | — | 7 |
| Spanish .. | — | — | — | — | 3 | — | — | 3 | — | — | — | 1 | — | — | — | — | 3 | — | 1 | 4 |
| Italian .. | 1 | — | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | 1 |
| Mathematics .. | 80 | 87 | 3 | 170 | 41 | 48 | 3 | 92 | 3 | 3 | — | 6 | 2 | 2 | — | 4 | 126 | 140 | 6 | 272 |
| History .. | 8 | 31 | 2 | 41 | 7 | 31 | 3 | 41 | 5 | 7 | — | 12 | — | 3 | 1 | 4 | 20 | 72 | 6 | 98 |
| Geography .. | 8 | 20 | 2 | 30 | 18 | 30 | — | 48 | 1 | 7 | — | 8 | — | 2 | — | 2 | 27 | 59 | 2 | 88 |
| Commercial Subjects .. | 6 | 13 | 9 | 28 | 2 | 2 | — | 4 | — | — | 1 | 1 | 1 | — | — | 1 | 9 | 15 | 10 | 34 |
| Economics .. | 1 | 1 | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | 1 | 1 | — | 2 |
| Scripture .. | — | — | — | — | — | 1 | — | 1 | — | — | — | — | — | 1 | — | 1 | — | 2 | — | 2 |
| Chemistry .. | 26 | 5 | — | 31 | 10 | 12 | 1 | 23 | 9 | 4 | — | 13 | 1 | — | — | 1 | 46 | 21 | 1 | 68 |
| Physics .. | 21 | 1 | — | 22 | 15 | 16 | — | 31 | 3 | 5 | — | 8 | — | — | — | — | 39 | 22 | — | 61 |
| Botany .. | — | 9 | — | 9 | — | 14 | — | 14 | 1 | 8 | — | 9 | — | 1 | — | 1 | 1 | 32 | — | 33 |
| Biology .. | 1 | 5 | — | 6 | 2 | 5 | — | 7 | 1 | 1 | — | 1 | — | — | — | — | 4 | 10 | — | 14 |
| Science .. | 7 | 3 | — | 10 | 1 | 1 | — | 2 | — | 1 | — | 1 | — | — | — | — | 8 | 5 | — | 13 |
| Zoology .. | — | — | 2 | 2 | — | 2 | — | 2 | — | — | — | — | — | — | — | — | — | 2 | — | 4 |
| Music .. | 2 | 18 | — | 20 | 4 | 1 | — | 5 | 1 | — | — | 1 | — | — | — | — | 7 | 19 | — | 26 |
| Handicraft .. | — | — | — | — | 1 | — | — | 1 | — | — | — | — | — | — | — | — | 1 | — | — | 1 |
| Physical Training .. | — | — | — | — | — | — | — | — | 2 | 1 | — | 3 | — | — | — | — | 2 | 1 | — | 3 |
| | 268 | 372 | 31 | 671 | 227 | 309 | 22 | 558 | 42 | 53 | 3 | 98 | 10 | 15 | 2 | 27 | 547 | 749 | 58 | 1354 |

SUBJECTS IN SECONDARY SCHOOLS

TABLE IV.

SHOWING THE ORDER OF THE FREQUENCIES OF MAIN SUBJECTS
IN THE THREE SURVEYS UNDER CONSIDERATION. •

| <i>Present Survey.</i> | | | <i>Welsh Survey.</i> | | | <i>English Survey.</i> | | |
|------------------------|-----------------|------------------------|----------------------|-----------------|------------------------|------------------------|-----------------|------------------------|
| <i>Order</i> | <i>Subject.</i> | <i>Freq- uency</i> | <i>Order</i> | <i>Subject.</i> | <i>Freq- uency</i> | <i>Order</i> | <i>Subject.</i> | <i>Freq- uency</i> |
| 1 | Mathematics | 170 | 1 | Mathematics | 79 | 1 | Mathematics | 76 |
| 2 | French .. | 114 | 2 | English .. | 51 | 2 | French .. | 65 |
| 3 | English .. | 103 | 2 } | French .. | 51 | 3 | Music .. | 34 |
| 4 | Classics .. | 52 | 4 | Chemistry .. | 33 | 4 | English .. | 30 |
| 5 | History .. | 41 | 5 | History .. | 25 | 5 | Chemistry .. | 20 |
| 6 | Chemistry .. | 31 | 6 | Geography .. | 23 | 6 | Geography .. | 19 |
| 7 | Geography .. | 30 | 7 | Welsh .. | 22 | 7 | Physics .. | 16 |
| 8 } | Physics .. | 22 | 8 } | Music .. | 19 | 8 | History .. | 14 |
| 8 } | Latin .. | 22 | 8 } | Physics .. | 19 | 9 | Latin .. | 12 |
| 10 | Music .. | 20 | 10 | Latin .. | 13 | 10 | Scripture .. | 6 |
| 11 | Botany .. | 9 | 11 } | Rural Science | 3 | 11 | Botany .. | 3 |
| 12 } | Biology .. | 6 | 11 } | Botany .. | 3 | 12 | Commercial | |
| 12 } | German .. | 6 | 13 } | Scripture .. | 2 | | Subjects .. | 2 |
| 14 } | Welsh .. | 2 | 13 } | Greek .. | 2 | 13 | Spanish .. | 1 |
| 14 } | Economics .. | 2 | 15 | Commercial | | | | |
| 14 } | Zoology .. | 2 | | Subjects .. | 1 | | | |
| 17 | Italian .. | 1 | | | | | | |

Table III shows the frequency of the demands for main subjects, either alone or in combination with one or more subsidiaries. This table shows some interesting differences between frequencies of demands for masters and mistresses in main subjects. In 1929, in the sample considered, a preponderance of mistresses was required for French, English, Geography, History, Mathematics, Classics, Music, and Biological subjects; and of masters for Physics, Chemistry, German, and Spanish. Considering main subjects one finds that about four times as many mistresses as masters were asked for in History, and about twice as many in Geography.

Table IV gives a comparative indication of the frequencies of main academic subjects for the three surveys. It will be seen that apart from Welsh, which occupies a special position in Welsh schools, and Music, which has a special position in girls' schools, there is very little difference in the order of importance. A glance at the totals in Table III shows that when subsidiary subjects are taken into account also, the order of frequency is very little altered.

B.—COMBINATIONS OF SUBJECTS.

(I) *Two Subjects, either Main Subjects, or One Main with One Subsidiary.*

Tables VA to VG show the frequencies of various combinations of two subjects. Table VA indicates that the most frequent two language combination was French and German. At the same time it is worth noting that combinations of one modern foreign language with English, and one modern language (including English) with a classical language, together occur twice as frequently as the French-German combination. This fact is probably accounted for in the following way. There is a strong tendency at the present time to popularize the teaching of German in secondary schools. Some authorities even prefer German to French. The smaller secondary schools with a view to economy in staffing will look for graduates who can offer both French and German. A combination of two modern foreign languages, however, presents some difficulty from the teaching point of view. The student offering such qualifications must endeavour to become proficient in speaking both languages, and should be well acquainted with the literatures of both. This means residence in two countries. Moreover, after such a student has graduated and commenced teaching, it is desirable that he or she should keep up-to-date in both languages, and this means re-visiting both countries. For most teachers this is too expensive a programme to keep up, both from the point of view of time and money. For this reason it may be more satisfactory for the language teacher to specialize and endeavour to reach a high degree of proficiency in one modern language, and teach as a subsidiary Classics or English, or some other Arts subject.*

* I am indebted to Professor Barbier, Head of the French Department at Aberystwyth, for this explanation.

SUBJECTS IN SECONDARY SCHOOLS

TABLE VA.
COMBINATIONS OF TWO LANGUAGES.

| <i>Subjects.</i> | <i>Ma.</i> | <i>Mi.</i> | <i>N.S.</i> | <i>Total.</i> |
|---|------------|------------|-------------|---------------|
| French-German | 34 | 30 | 7 | 71 |
| English-French | 28 | 26 | 1 | 55 |
| English-Latin | 21 | 31 | 1 | 53 |
| French-Latin | 19 | 18 | 2 | 39 |
| English-German | 9 | 4 | 2 | 15 |
| French-Spanish | 6 | 7 | 2 | 15 |
| French-Classics | 3 | 4 | 1 | 8 |
| English-Classics | 3 | 2 | — | 5 |
| German-Spanish | 5 | — | — | 5 |
| German-Latin | 1 | 3 | — | 4 |
| English-Spanish | 1 | 1 | 1 | 3 |
| French-Italian | — | 3 | — | 3 |
| English-Welsh | 1 | 1 | — | 2 |
| Latin-Welsh | 1 | — | — | 1 |
| | 132 | 130 | 17 | 279 |
| Two Modern Foreign Languages | | | | 94 |
| English with a Modern Foreign Language | | | | 75 |
| One Modern Language (including English) with a Classical Language | | | | 110 |
| | | | | 279 |

TABLE VB.
COMBINATIONS OF A LANGUAGE WITH ANOTHER ARTS SUBJECT.

| <i>Subjects.</i> | <i>Ma.</i> | <i>Mi.</i> | <i>N.S.</i> | <i>Total.</i> |
|-------------------------------------|------------|------------|-------------|---------------|
| English-History | 8 | 19 | 3 | 30 |
| English-Mathematics | 11 | 10 | 1 | 22 |
| French-History | 8 | 9 | 1 | 18 |
| Latin-History | 6 | 9 | — | 15 |
| English-Geography | 6 | 3 | — | 9 |
| French-Mathematics | 4 | 5 | — | 9 |
| French-Geography | 4 | 5 | — | 9 |
| Latin-Mathematics | 1 | 6 | 1 | 8 |
| Classics-History | 2 | 1 | 1 | 4 |
| German-Geography | — | 3 | — | 3 |
| French-Commercial Subjects | 2 | — | — | 2 |
| Latin-Geography | 1 | 1 | — | 2 |
| English-Commercial Subjects | 1 | — | — | 1 |
| Welsh-History | — | 1 | — | 1 |
| Welsh-Mathematics | 1 | — | — | 1 |
| German-Mathematics | 1 | — | — | 1 |
| Classics-Mathematics | — | 1 | — | 1 |
| German-Commercial Subjects | 1 | — | — | 1 |
| Spanish-Geography | — | 1 | — | 1 |
| German-History | 1 | — | — | 1 |
| | 58 | 74 | 7 | 139 |

TABLE Vc.
COMBINATIONS OF TWO ARTS SUBJECTS.

| <i>Subjects.</i> | <i>Ma.</i> | <i>Mi.</i> | <i>N.S.</i> | <i>Total.</i> |
|-----------------------------|------------|------------|-------------|---------------|
| Geography-History | 4 | 8 | — | 12 |
| History-Mathematics | — | 4 | — | 4 |
| History-Economics | — | 2 | — | 2 |
| History-Commerce | — | — | 1 | 1 |
| Geography-Economics | 2 | — | — | 2 |
| Geography-Commerce | 1 | — | — | 1 |
| | 7 | 14 | 1 | 22 |

TABLE Vd.
COMBINATIONS OF TWO SCIENCE SUBJECTS.

| <i>Subjects.</i> | <i>Ma.</i> | <i>Mi.</i> | <i>N.S.</i> | <i>Total.</i> |
|-------------------------------------|------------|------------|-------------|---------------|
| Mathematics-Physics | 26 | 24 | — | 50 |
| Mathematics-General Science | 12 | 9 | 1 | 22 |
| Chemistry-Physics | 9 | 12 | — | 21 |
| Chemistry-Mathematics | 6 | 6 | 2 | 14 |
| Chemistry-Biology | 5 | 7 | — | 12 |
| Botany-Zoology | 2 | 7 | 3 | 12 |
| Botany-Mathematics | — | 6 | — | 6 |
| Botany-General Science | — | 6 | — | 6 |
| Botany-Chemistry | 1 | 5 | — | 6 |
| Botany-Physics | 1 | 4 | — | 5 |
| Biology-Mathematics | 1 | 2 | — | 3 |
| Biology-General Science | 1 | 2 | — | 3 |
| Biology-Physics | 2 | — | — | 2 |
| Zoology-Chemistry | — | 2 | — | 2 |
| Chemistry-General Science | 2 | 1 | — | 3 |
| Physics-General Science | 1 | — | — | 1 |
| Physics-Metallurgy | 1 | — | — | 1 |
| Mathematics-Zoology | — | 1 | — | 1 |
| Botany-Biology | — | 1 | — | 1 |
| Botany-Physiology | — | 1 | — | 1 |
| Chemistry-Domestic Science | — | 1 | — | 1 |
| | 70 | 97 | 6 | 173 |

TABLE Ve.
COMBINATIONS OF A SCIENCE WITH AN ARTS SUBJECT.

| <i>Subjects.</i> | <i>Ma.</i> | <i>Mi.</i> | <i>N.S.</i> | <i>Total.</i> |
|-----------------------------------|------------|------------|-------------|---------------|
| Geography-Mathematics | 8 | 16 | 1 | 25 |
| Geography-General Science | 1 | 5 | — | 6 |
| Geography-Botany | — | 5 | — | 5 |
| Geography-Physics | 3 | — | — | 3 |
| Botany-English | — | 2 | — | 2 |
| Mathematics-Commerce | 1 | 2 | — | 3 |
| Geography-Biology | 1 | — | — | 1 |
| Physics-Latin | — | 1 | — | 1 |
| French-Chemistry | — | 1 | — | 1 |
| French-General Science | — | 1 | — | 1 |
| General Science—Commerce | — | 1 | — | 1 |
| Chemistry-German | — | 1 | — | 1 |
| | 14 | 35 | 1 | 50 |

TABLE VF.
COMBINATIONS OF AN ACADEMIC WITH AN ACCESSORY SUBJECT.

| Subjects. | Scripture. | | Music. | | Physical Training. | | Handicraft. | | Drawing. | | Shorthand. | | Needlework. | | Total. |
|--------------------|------------|-----|--------|-----|--------------------|-----|-------------|-----|----------|-----|------------|-----|-------------|-----|--------|
| | Ma. | Mi. | Ma. | Mi. | Ma. | Mi. | Ma. | Mi. | Ma. | Mi. | Ma. | Mi. | Ma. | Mi. | |
| English .. | 1 | 9 | 2 | 3 | 2 | — | 1 | — | — | 1 | — | — | — | — | 19 |
| Mathematics .. | 1 | 2 | 2 | 2 | 2 | — | 1 | 2 | — | — | 1 | — | — | — | 13 |
| French .. | — | — | 1 | 2 | 4 | 1 | — | — | — | 1 | — | — | — | — | 9 |
| Geography .. | — | — | — | 1 | 2 | — | — | — | 1 | — | — | — | — | 1 | 5 |
| Classics .. | 1 | 1 | — | 1 | — | — | — | — | — | — | — | — | — | — | 3 |
| Latin .. | — | 1 | — | 1 | 1 | — | — | — | — | — | — | — | — | — | 3 |
| German .. | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | 1 |
| History .. | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | 1 |
| Welsh .. | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | 1 |
| General Science .. | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | 1 |
| Chemistry .. | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | 1 |
| Physics .. | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | 1 |
| | 4 | 13 | 5 | 10 | 11 | 1 | 4 | 2 | 4 | 2 | 1 | — | — | 1 | 59 |

SUBJECTS IN SECONDARY SCHOOLS

TABLE VG.

SUBJECTS WITH UNSPECIFIED SUBSIDIARIES.

| <i>Subjects.</i> | | | | | | <i>Ma.</i> | <i>Mi.</i> | <i>N.S.</i> | <i>Total.</i> |
|------------------|----|----|----|----|----|------------|------------|-------------|---------------|
| Mathematics | .. | .. | .. | .. | .. | 14 | 11 | 1 | 26 |
| English | .. | .. | .. | .. | .. | 10 | 4 | 2 | 16 |
| French | .. | .. | .. | .. | .. | 8 | 8 | — | 16 |
| Geography | .. | .. | .. | .. | .. | 5 | 3 | — | 8 |
| History | .. | .. | .. | .. | .. | 1 | 7 | — | 8 |
| Latin .. | .. | .. | .. | .. | .. | 2 | 5 | — | 7 |
| Physics | .. | .. | .. | .. | .. | 3 | 1 | — | 4 |
| Chemistry | .. | .. | .. | .. | .. | 2 | 2 | — | 4 |
| Classics | .. | .. | .. | .. | .. | 2 | 2 | — | 4 |
| Biology | .. | .. | .. | .. | .. | — | 1 | — | 1 |
| German | .. | .. | .. | .. | .. | 1 | — | — | 1 |
| Music .. | .. | .. | .. | .. | .. | 1 | — | — | 1 |
| Handicraft | .. | .. | .. | .. | .. | 1 | — | — | 1 |
| | | | | | | 50 | 44 | 3 | 97 |

Of the general Arts subjects, History occurs most frequently, combined with English (30 times), French (18 times), Latin (15 times), Geography (12 times), and Classics (4 times).

Geography is combined with a Science or Mathematics (39 times). Apart from this, there is very little tendency to combine Arts and Science subjects. Of the few that appear in Table VE the teachers were mainly women.

The more important facts concerning the combinations of two Science subjects (Table VD) are :

- The preponderance of combinations of Physics, Mathematics, Chemistry, particularly amongst the men teachers.
- Women are much more frequently offered the opportunity of teaching two of the three, Physics, Chemistry, Mathematics, than of specializing in Physics or Chemistry.
- There is a distinct preponderance of women over men in the combinations of Botany and Zoology with another science.
- Of the men teaching Botany or Zoology in a two-subject combination the majority combine one of these sciences with Physics, Chemistry, or Mathematics.

SUBJECTS IN SECONDARY SCHOOLS

TABLE VIA.

MOST FREQUENT COMBINATIONS OF THREE ARTS SUBJECTS.

| <i>Subjects.</i> | <i>Ma.</i> | <i>Mi.</i> | <i>N.S.</i> | <i>Total.</i> | <i>Welsh</i> | <i>English</i> |
|--------------------------------|------------|------------|-------------|---------------|--------------|----------------|
| English-French-Latin | 3 | 4 | 0 | 7 | 3 | 4 |
| English-French-German | 4 | 1 | 1 | 6 | — | 2 |
| History-Latin-Mathematics .. | 1 | 5 | 0 | 6 | 2 | 2 |
| English-French-History | 2 | 3 | 0 | 5 | — | 13 |
| English-History-Latin | 3 | 2 | 0 | 5 | 6 | 6 |
| French-German-Spanish | 3 | 2 | — | 5 | 2 | — |
| English-French-Mathematics .. | 1 | 1 | 2 | 4 | 4 | 1 |
| English-History-Mathematics .. | 3 | 1 | — | 4 | 4 | 4 |
| French-History-Geography .. | 2 | 1 | 1 | 4 | 1 | 2 |
| French-German-Latin | 1 | 2 | 1 | 4 | — | 1 |
| English-French-Scripture .. | — | 3 | — | 3 | — | 1 |
| English-History-Geography .. | 2 | 1 | — | 3 | 2 | 12 |
| English-Latin-Mathematics .. | 1 | 2 | — | 3 | 2 | 2 |
| French-History-Latin | 1 | 2 | — | 3 | 1 | — |
| Economics-Geography-Commerce | 2 | 0 | 1 | 3 | — | — |
| German-Latin-Mathematics .. | — | 3 | — | 3 | — | — |
| English-Geography-Mathematics | — | — | — | — | 3 | 2 |

TABLE VIB.

MOST FREQUENT COMBINATIONS OF THREE SCIENCE SUBJECTS.

| | <i>Ma.</i> | <i>Mi.</i> | <i>N.S.</i> | <i>Total.</i> | <i>Welsh</i> | <i>English</i> |
|--|------------|------------|-------------|---------------|--------------|----------------|
| Chemistry-Physics-Mathematics | 12 | 7 | — | 19 | 6 | 13 |
| Chemistry-Physics-Botany .. | — | 6 | — | 6 | 1 | 5 |
| Chemistry-Mathematics-General Science | 2 | 2 | — | 4 | — | — |
| Mathematics-Physics-Another Science | 1 | 1 | — | 2 | 1 | 2 |
| Chemistry-Botany-Biology .. | 1 | 1 | — | 2 | 1 | — |
| Chemistry-Botany-Mathematics .. | 2 | — | — | 2 | 1 | — |
| Botany-Two Other Sciences .. | — | 2 | — | 2 | 1 | 1 |

(2) *Three Subjects.*

(a) *Arts.*—The most frequent combinations of three subjects demanded are shown in Table VIA. The whole table is not presented, as it is more instructive to analyse the combinations into classes. We then find the following:—

Combinations of :

| | | |
|---|----|------|
| Three modern languages (English, French, German, Spanish) | 13 | } 28 |
| Two modern and one classical (English, French, German, Spanish, with Latin, Classics) | 15 | |

SUBJECTS IN SECONDARY SCHOOLS

| | | |
|--|----|------|
| Two languages with one Arts (English, French, German, Latin, Classics, with Mathematics, History, Geography, Commerce) | 31 | } 73 |
| Two languages and one accessory (English, Welsh, French, German, Latin, Classics, with Music, Scripture, Needlework, Physical Training) .. | 11 | |
| One language with two Arts (English, French, German, Latin, with History, Geography, Mathematics, Economics, Commerce) | 21 | |
| One language, one Arts, one accessory.. .. . | 8 | |
| English, with two accessories | 2 | |
| Three Arts (Geography, History, Economics, Commerce) | 4 | |
| Two Arts with one accessory | 2 | |
| One Arts with two accessories | 2 | |
| Arts with Science.. .. . | 6 | |
| Combinations not precisely specified | 16 | |

It will be seen that combinations of language with Arts or accessory subjects are most frequently asked for.

Treating the Science combinations in the same way we get the following (taking Mathematics as a Science) :—

| | <i>Ma.</i> | <i>Mi.</i> | <i>Total</i> |
|--|------------|------------|--------------|
| Three physical Sciences (Chemistry, Physics, Mathematics) | 12 | 7 | 19 |
| Two physical with one biological Science (Chemistry, Physics, Mathematics, Botany, Biology, Nature Study, General Science) | 6 | 9 | 15 |
| One physical with two biological Sciences (Chemistry, Physics, Mathematics, Botany, Zoology, Agricultural Science, General Science, Gardening) | 2 | 7 | 9 |
| Science with Non-Science (Non-Science include Geography, Handwork, Drawing, Music, Physical Training, Commerce) | 13 | 11 | 24 |

The preponderance of masters required for the physical Sciences, and of mistresses for biological Science is again evident.

C.—GENERAL FORM WORK.

One point of interest was raised in both the previous surveys mentioned, namely, the present opportunities for the teacher who could offer to take three or four subjects with lower forms. In the English report there was some opinion in favour of the pass graduate for lower and middle school work, but it was not very

pronounced.* In the Welsh report, however, although the majority of the heads favoured the honours graduate, there was a considerable body of opinion, some of it strongly expressed in favour of the general form teacher. For example, one Head replied: "I would put in a plea for broader courses. The old form master type is being missed. In the lower forms I am veering back to the man who can take three or four subjects. At present I find a tendency in young honours graduates to plead for one subject only." To test this particular point all the advertisements for general form work were noted, with the following results:

Masters, 42; Mistresses, 60; Not Specified, 3; Total, 105.

Thus 105 teachers out of about 1,850 were required for general form work, a proportion of roughly 1 in 18. If we include in the above figures cases where four subjects were asked for we get a total of 156. This represents about one-twelfth of the total number of cases covered by the survey. In other words one may say that in a staff of twelve teachers, one, on the average, will be taking general form work.

D.—SOME FURTHER POINTS OF GENERAL INTEREST.

(a) It is worth noting that there is a strong tendency to demand both a knowledge of phonetics *and residence abroad* as additional qualifications for good modern language posts. It seems eminently desirable for graduates in modern languages to add these qualifications to their other attainments.

(b) It is occasionally interesting to know in which subjects the competition of the older universities is keenest. All the advertisements in which a definite preference was stated for Oxford or Cambridge degrees were noted. A summary of the subjects is given:

| | | | | | <i>Ma.</i> | <i>Mi.</i> | <i>Total</i> |
|-----------------------------|----|----|----|----|------------|------------|--------------|
| Mathematics | .. | .. | .. | .. | 1 | 16 | 17 |
| Classics | .. | .. | .. | .. | 4 | 9 | 13 |
| Modern Languages | .. | .. | .. | .. | 2 | 9 | 11 |
| English | .. | .. | .. | .. | — | 9 | 9 |
| Science | .. | .. | .. | .. | 1 | 6 | 7 |
| History | .. | .. | .. | .. | 1 | 5 | 6 |
| Classics-History | .. | .. | .. | .. | — | 1 | 1 |
| English-History-Mathematics | .. | .. | .. | .. | 1 | — | 1 |
| | | | | | — | — | — |
| | | | | | 10 | 55 | 65 |
| | | | | | — | — | — |

* See this Journal, June, 1925, p. 102.

(c) One of the specific points for which this survey was undertaken was to get more information about the importance of Economics as a teaching subject. The results show that there is very little demand at present for it. In order to make as favourable a case as possible the advertisements from the technical colleges were included. One finds, however, that in the great majority of cases where Economics is asked for, qualifications in Commerce, and in the usual commercial subjects, i.e., Shorthand, Typewriting, Business Arithmetic, Book-keeping, etc., are also required. More degrees in Commerce than in Economics were demanded, and for some of these posts, actual experience in some commercial or industrial organization was preferred. It seems clear that in the preparation of prospective teachers, Economics, however great its intrinsic value as a study, is only of subsidiary importance. As a subsidiary to History and Geography it has much to recommend it, and it is probable that many modern schoolmasters will welcome a knowledge of it in connection with these subjects. However, to the student who intends to teach in a secondary school and who pursues this study to the honours stage at the expense of other subjects, it is more likely to be a source of embarrassment than profit. The same may be said of Philosophy. Geology as a school subject seems to be strangely neglected. There is a good deal to be said in its favour as a science subject, particularly in rural districts and in schools where the laboratory accommodation is limited. However, Geology was not mentioned more than two or three times as a possible subsidiary subject.

SUMMARY OF CONCLUSIONS.

(a) In the sample of advertisements reviewed, in 1929 some two hundred more mistresses than masters were required.

(b) At least 75 per cent. of the posts required one or two subjects. Of the two subject posts the larger proportion was for one main and one subsidiary subject. It is probable that the minimum qualification for secondary school work should be taken as a good honours degree in one subject with at least one other subject pursued to the final stage.

(c) Specialization appears to be greater amongst women teachers. About 6 per cent. more men than women teachers were required for two-subject posts.

(d) Considering main subjects there are some differences as between masters and mistresses. We find :

- (1) A preponderance of women desired for French, English, Geography, History, Mathematics, Classics, Music, and Biological subjects. The difference in the case of Geography, History, Music, and Biological subjects is striking.
- (2) A preponderance of men for German, Physics, Chemistry, and Spanish.

(e) Very few posts were offered to women as specialists in Physics and Chemistry, and very few for men in Biological Science. It seems undesirable, therefore, for women to specialize in the natural sciences and for men in the biological sciences. If biological subjects are taken by a man student he should make every attempt to strengthen his qualifications with the addition of Mathematics, and/or a physical science.

(f) There are more opportunities for women specialists in Music than for men.

(g) While the most frequent two-language combination is French-German, at least twice as many posts were offered for combinations of a modern foreign language with English or Classics, and there appear to be some sound educational reasons for the latter.

(h) History is the most frequent non-linguistic arts subject in two-subject combinations.

(i) Of the three-subject combinations the most frequent were those with one or two languages with general Arts subjects, notably History, Mathematics, and Geography.

(j) There seems to be a significant increase in the demand for teachers of Spanish, particularly in combination with some other modern language.

SUGGESTIONS FOR FURTHER INVESTIGATION.

To people responsible for advising prospective teachers, whether in secondary schools or in university departments, such information as is set out here and in the previous surveys noted, is of obvious interest. One analysis, however, whatever the method of approach, is not sufficient to settle some of the more important problems that arise, particularly in connection with changes in curriculum and

organization. For instance, one needs to keep an eye on the market for such subjects as Biology and Spanish, and for any special subject combinations. The samples analysed hitherto are not wide enough. It would be of considerable interest and value if some central body having access to the requirements of such institutions as the Joint Agencies, University Appointments Bureaux, and possibly the private employment agencies, could collect and analyse the demands for teachers annually and issue the information in some suitable form. The bulk of the advertisements are issued between February and July. A suitable period for analysis is, therefore, from August to July annually. The method of procedure is comparatively simple. The advertisements can be cut and pasted on to cards, which may then be filed under the names of the issuing schools. Repeat advertisements can then be discovered easily and discarded. This precaution is necessary, as some posts are advertised, and owing to failure to attract suitable candidates, are again advertised after a period of some weeks has elapsed. The selected cards can then be sorted into "masters" and "mistresses," and into any further category desired.

Similar information is desirable for the central or modern schools where changes are likely to take place rapidly in the next few years.

Beyond the Dalton Plan.

BY A. D. HEWLETT.

I.

AT the outset I may indicate the principles on which the work here to be considered is based, and the first of these is individuality. It is a principle which has inspired a remarkable unanimity in philosophy, science, and religion. Psychology will not let us ignore the extent to which individuals differ in mental and emotional equipment. Biology points to individual response and hormic activity as the distinguishing mark of living things. Religion teaches the value of the individual life and destiny. The philosophical basis of education is the idea that the individual self is not ready made, but has to be achieved in relation to an environment ; though on the other hand this self can at no stage of its development be regarded as incomplete, but rather achieves itself at every stage. In truth a sound educational practice can be built only on the basis of an embracing faith. Faith in the educand is the first necessity, and this means, not a comfortable assumption that all children are born good, but a conviction that they are born natural, with unfathomed potentialities, and that it is useless to blame them for not being other than they are. The practical educator must assert, as against both the Galtonian and the Herbartian points of view, the divine autonomy which both implicitly deny.

Faith in the environment which the school has to offer is the second basic principle. It is indeed our only justification for putting children to school. "The school is fundamentally an experience giving institution, and if it cannot give more vital experiences than the child can get elsewhere, it has no valid claim on his time." In the past, educational practice has been characterized by a too exclusive confidence in the value of the school's work, to the neglect of the principle of autonomy. Thus we have to guard against the danger that attempts at reform may go to the other extreme, neglecting, in their enthusiasm for the individual, the presentation of proper material for his use. The worthiest material for the human mind is to be found in the finest achievements of the human mind. These achievements are represented by the literature

and science which form the basis of school studies. This is no place for a discussion of curricula; the way of progress does not lie primarily in any revolution here. It lies in an appreciation of the relation which subjects of study ought to bear to the student mind.

Traditional methods of so-called education have been most effectively criticized by the many courageous attempts of recent years to break away from them. The "Dalton Plan" is probably the best known and most widely tried of such efforts, and exercised some influence upon the work we are to examine. The present view-point, however, has emerged from the Dalton Plan rather by way of stepping-stones of a dead plan than by way of legitimate descent. For the "Plan," courageous and critical though it was, was yet subject to fatal defects. The freedom which it offered to the student was a spurious freedom; the shackles of the class-teacher were exchanged for those of the written allocation of work. Work under the Dalton Plan is still the teacher's work, still something that has to be done, not because the doer is alive to its meaning and purpose, but because it is prescribed by authority. The same is true of every scheme for secondary work that has hitherto been propounded as a solution to its problems. It is certainly true of the "Group Study Plan," a recent American scheme that has some of the outward trappings of the work I shall describe.

This work is independent of any "system." It had its origin in a boys' secondary school* which some years ago adopted the Dalton Plan. Modifications were gradually introduced until the only legacy to the future was the generous view taken of the value of private study. In these circumstances a new outlook was required if such an opportunity was to be worthily utilized. After much earnest seeking, this new outlook, together with a practice which is a commentary upon it, has been achieved. There is nothing ultimate about the details of organization which I shall give. They serve to show that it is possible to realize in practice some ideals of education that have so far been almost confined to the theorists. School studies are a means, but the end is the true development of the child. And we must bear in mind that the achievement of individuality means something far more than the exploitation of individual differences.

* The Tiffin School, Kingston-on-Thames.

II.

“ PROSPECTANT EDUCATION.”

The “ work of the school ” is the pupil’s work, and the “ methods of education ” are the methods of the educand. For this reason “ Prospectant Education ” is not called the “ prospectant ” or “ looking-forward ” *method*. The term denotes a principle which may give rise to as many methods as there are students. For this reason, again, it is impossible to feel confident of giving, in a short article, a clear description of the work that is being done. I will endeavour to omit nothing that is essential to enable the reader to form an impression. First, then, the idea of prospectant education has been worked out and applied subject to conditions arising out of the normal organization of a secondary school. Attendance is compulsory, and the school programme of the usual type. The day’s work is divided into five periods each of one hour, and classes move from room to room to meet the various masters, who themselves keep the same room. What I shall have to say must not be understood to apply to the whole school, for it is based in fact upon work which is under the guidance of a small minority of the staff. The restraint thus implied by the requirements of class organization and of the time-table with its fixed curriculum are accepted quite naturally by the boys as conditions of their work.* We are to consider how there has been brought to birth a new spirit to grapple with tasks thus far defined. Within these limits the scope of the work has extended to boys of all ages and types, and to diverse branches of study which will be mentioned later.

The student’s personal responsibility for his own work and development is the practical basis of prospectant education. He is not *compelled* to be busy, nor are his precise activities and his standard of achievement prescribed for him. He makes his own plans of study for a period, normally four weeks, and carries them out in pursuance of his own purposes. He studies sometimes privately,

* I do not here raise any question as to how far these limitations might with advantage be removed. Our *immediate* problem as teachers is plainly to make what advances we can in our practice in existing circumstances. In passing, it may be noted that the success of these principles, despite the limitation of their sphere of application, has two substantial advantages. First, it shows unmistakably that the cult of individuality need involve no neglect of existing scholarship, thus justifying my second article of faith (*see* Introduction); secondly, it has demonstrated that significant progress in the method and spirit of education can be made without waiting upon the conversion, spontaneous or enforced, of a whole staff. In this respect prospectant education stands in marked contrast to the Dalton Plan.

sometimes in co-operation with one or more of his fellows, or with his teacher. He criticizes and corrects, as far as is practicable, his own exercises, and tests his own progress. Sometimes he fails. That is to say that sometimes he falls below the superficial achievement which would be exacted from him by conventional authoritarianism. In rare cases he reveals himself as a natural slacker. But he always succeeds just as well as he ought to do, and in normal cases the success, if assessed by sound standards, is conspicuous. The boy as student forms the habits and discovers the methods of study ; as scholar is able to make vital contact with the subject matter of his pursuit, as he prepares to appreciate its principles and its relation to other branches of human endeavour ; and as young human being, in the course of this prospecting, he finds himself in relation to a rational environment both spiritual and material.

It is apparent that the function of the teacher in relation to students such as these grows not less but vastly more important. It has been more than once suggested that the reason for the success in after life of so many school failures is precisely the fact that they were failures at school. The "A" boy is the teacher's natural prey. The "C" boy, by offering a passive resistance to conventional teacher-craft, preserves his true vigour and initiative unimpaired. Stupidity was a safe stronghold, when the teacher's task was to enslave intelligence ; but prospectant education has a mighty constructive work for the teacher to do. His function is to make provision for the student's profitable activity, and therefore, since he is neither master nor director nor even supervisor, we call him "provisor," a name which sums up his functions as nearly as possible. He is still indeed a teacher, if teaching means causing to learn, but the word "teacher" is surrounded by misleading associations.

The provisor's whole duty is to render possible effective work on the part of the student. In the first place he is always ready to be consulted by an individual or by a group of some or all of the students. He is regularly consulted at the beginning of a student's "contract," when the boy submits his plan for criticism. This enables the provisor to suggest the abandonment of any work which he knows would be unprofitable ; while his positive suggestions may be, without violating the spirit of the work, as strong as the confidence he inspires. He regards himself as a fellow-student, who is glad to put his greater experience into the common store. It is

in some ways easier to say clearly what he does not do. He does not insist upon the performance of work, though he tries to make clear its value. He does not prescribe any task which must be done, though he may point decisively to what, in relation to a given purpose, ought to be done. I cannot help insisting once more that the crux of prospectant education is the spirit in which it is undertaken, for once that spirit has been called into being, the provisor may do many things which do not apparently differ much from the conventional practices of a teacher.

This is normally most noticeable at the beginning and the end of a course of study. The provisor opens up, in a series of lessons, the main lines of the subject, and the main principles of method. Again, towards the end of a course, he can do most valuable work by assisting the students to organize their gains into a systematic body of knowledge. It is important to realize that while teaching in the narrower sense should be a logical and systematic process, studying is not so, and cannot be so. Principles and understanding must grow out of study, but if instead they are forced into it, they have no value for the student, but a seriously diminished chance of ever achieving any value. The place for systematizing is clearly at the end of a course of study. The provisor encourages the aggregation of as much vital experience, as many points of contact with and of practical adjustment to the work in hand as the student can find occasion for. The latter prepares, as it were, his mental saturated solution, before attempting in a final review (not a hurried scamper, for it may take a year), to secure his crystals.

In addition to these functions, the provisor's duty, despite anything I have said to the contrary, is one of organization. There is no real inconsistency involved, for he has to build, not a mechanical system, but a helpful and adaptable environment. Books and other literature must be accessible. Provision must be made for the ready integration and dispersal of groups for co-operative endeavour. Arrangements to secure these ends may be readily made, and only two of our existing devices are such as to call for special mention. The first is the use of a card index for recording a boy's work. When the student has completed his plan, he sets it out upon a card, which is then kept by the provisor. As the work is completed it is checked off. The card is thus a compact record of both endeavour and achievement, while its preparation is a constant encouragement to purposeful and methodical study. The second device relates to the furniture of the class-room, and is a considerable

revolution. Serious work is scarcely possible, and rational movement and co-operation quite out of the question, in a class-room filled with rows of undignified lockers, with the (task-)master's desk probably set on a platform to overlook them. Our rooms are furnished instead with a number of bureaux, which stand around the walls of the room. The boy studying individually therefore turns his back upon any possible movement and discussion in the room, and works in reasonable conditions of privacy. The centre of the room is provided with tables which accommodate those working in co-operation. The provisor's desk is in an inconspicuous position, and has the same function as the central tables. Both chairs and tables are light and collapsible, so that the centre of the room may be readily cleared if necessary. This equipment is a big factor in the success of the work. Thus, it is the function of the provisor (and of the educational authorities behind him) to bring opportunities to the educand. It is the latter's job to make use of these opportunities, as it is the horse's job to drink.

This account may gain in precision (though the nature of the subject makes it extremely difficult to be precise), if we examine the relation of prospectant education to particular subjects of the curriculum. Work in mathematics was one of the progenitors of the principles we are considering. Mathematics is itself a quest for precision, and precision is the crown not the foundation of the work. In a five years' course leading to the first examination, the students may spend nearly four exploring the subject in their own way. The provisor discusses the aims and progress of the work from time to time with the whole group of boys. He gives further individual instruction when he is asked for it. He makes available suitable books, materials, and exercises. The students choose their exercises, carry them out, check them, and correct them. They consult the provisor at any stage of this process. They practise "mental mathematics" in partnership. In the latter part of the course, they are led to organize their knowledge into a system embodying the fundamental principles of the subject, which is thus recognized as a coherent science. To facilitate this, a series of revision summaries has been worked out, which develops the subject along organic lines. These are provided on papers which the student may receive and master one at a time.*

* See references at the conclusion of this article.

The study of languages* has offered many difficulties to be solved, but requires no change of principle. The first necessity is the provision of sound books and literature, and the second an introduction to right methods of study. Such an introduction is given in part by early lessons of a normal type, and in part elaborated when it is desirable throughout the course. The very necessary drill in grammar, taken with a whole class at one time, normally follows the boys' own study, for here as elsewhere, precision is sought as the crown of the work. Class work in pronunciation and reading, which are so important in the case of a modern language, is dealt with specifically by means which do not differ materially from normal class methods. Even this work, however, is informed by the spirit which arises out of the general principles of prospectant education. The boy's own study is a complete process, including revision, tests, and the checking of tests by reference to the books studied. Similarly, he marks grammatical exercises and, where practicable, other written exercises with the aid of keys which are provided. In the case of such work as prose composition, which the boy cannot completely criticize for himself, the provisor's marking takes the form of a reasoned comment instead of the usual slashings of blue pencil. Thus in any case the boy is led to direct his observation and his study to mastering the points wherein he has failed.

When we turn to social studies* we find again different problems of detail awaiting us. Here the subject is necessarily abstract, second-hand, and remote from a boy's experience. This points at once to the need for a period of browsing. In history no continuity is essential; the educand requires only the opportunity to become familiar with various cross-sections of human development. History study was the second of the progenitors of prospectant education because it offers such a congenial opportunity for the flourishing of the "information fallacy," the confusion between verbalism and true understanding. In no branch of work so much as in the social subjects does the student so urgently need to be allowed to gain experience before the attempt at precision begins. As these studies demand a mature mind for their full appreciation, the time for systematizing is postponed as long as possible. During the final year of the first examination course, the outlines and principles of

* What follows is based upon experience with Latin and French, History and Economics.

the subjects are made clear by the use of summaries and exercises designed for this purpose. As in the case of mathematics, they are sectioned conveniently, and can be demanded and mastered by the student in reasonable stages. It is easy for discussions to take place among a group of boys, thus encouraging the recall and critical use of facts.

For the moment it is not possible to refer to practical experience in any other subjects of the school course ; it remains to deal with the vexed question of external examinations. I suppose Sir John Adams expresses the prevailing opinion even of thoughtful educationists when he says : “ Nothing of vital importance can be done in the way of reforming educational methods till this incubus has been removed.” But while few teachers would deny that the external examination is exercising an unwholesome constraint upon the work of the school, it may be doubted whether there is any justification for this counsel of despair. After all, if the prospect of a public examination exerts an influence directly upon the schoolboy, it functions as a part of his social environment, and summons him to conform to standards which transcend the school society. Clearly in itself this is not undesirable, and may be a very healthy stimulus. It is when the teacher yields to this constraint and transmits it in an artificially stringent guise, that entirely evil effects are produced. The first principle that needs to make itself effective in this connection is that it is no part of a schoolmaster’s business to push a mediocre pupil or kick a lazy one through an examination. And the second is this : that if the examination itself is forgotten, and more attention paid to the elaboration of sound conditions and methods of work, all the pupils who ought to do so will tackle the examination successfully when it comes.

This is the standpoint of prospectant education. Accepting for the moment the existence of external examinations as an environmental fact, it gives to pupils a straightforward account of what is required of them, and affords them the opportunity of meeting those requirements. The achievement still waits upon the striving of the student. With what result ? Our experience so far (based upon the London General School Examination), is that results do not suffer, and may be improved, by the adoption of these principles. For example, of two similar sets of boys trained in mathematics by the same master, the later set (1928) was markedly more successful after their self-chosen, self-imposed study, than the earlier set (1926), whose course had been of a conventional type. Yet the earlier

set had done quite well. Another interesting example, throwing a light upon the question from a different angle, is the following. A number of boys (examined 1929) were trained on traditional lines in all their work except history. History they studied "prospectantly." In the examination those who gained the School Certificate averaged a sound pass standard in history, while the group which matriculated similarly reached credit standard in this subject. Their success in the self-directed study corresponded therefore very remarkably with their general achievement, and it may reasonably be claimed that the result was just what it ought to be. It would be possible to dwell on this question of examinations. But, while statistics based upon the results would be of small validity owing to the non-objective nature of the examination, it would also be wrong, from the special point of view of this paper, to give to the examination, by any such means, too prominent a place in our discussion. Prospectant education has not been evolved to subserve examinations but to promote healthy individual development of mind and character.

Such are the central aims and achievements of this new practical outlook in education. A number of incidental valuable effects are worth mentioning. When once the compulsion of adult authority is removed, and pupils can believe that they work to their own advantage only, and fail to their own detriment, problems of class order cease to exist. The normal atmosphere is one of serious study. When the provisor thinks it wise to lecture, he may count on an eager audience, an audience which knows it has much to learn. Or if he misjudges the need, and talks at the wrong time, he will face a new kind of unwilling audience, an audience patient and resigned, well aware that the teaching is not just at the moment in touch with its needs, and hoping to be allowed to resume work as soon as possible. There is the most happy co-operation between provisor and student. The latter develops a spirit of thoughtful enquiry, and shows real appreciation of the assistance rendered him. In regard to his fellows his individual work breeds a social outlook. For with a number of boys pursuing their own legitimate purposes within the same room, integrating and dispersing small groups from time to time, there is born a real quasi-natural social organism, such as paradoxically could never arise out of a uniformly directed class. It is natural for these boys to organize, as they do, social activities for themselves out of school hours. Within the social environment, no longer intimidated by the authority of *force majeure*, the boy becomes a new

personality. He is ready to discuss frankly problems which in less happy circumstances remain the schoolboy's guilty secret, and such problems are rendered largely innocuous by exposure. Thus the whole community and its individual members find in school and its occupations (which too easily become an interlude), a veritable part and source of their life and being.

III.

We are now able to formulate a theory as to the wider significance of our plan. A survey of the achievements of experimental pedagogy makes it apparent that most advances have been made in the sphere of primary education. The Montessori method, the "Project" method, the "Dramatic" method, in various forms, methods such as those of Mrs. Johnson at Fairhope, Alabama,* have all been applied with success in this sphere. All of these, no less than Mr. Cook's own method, are "Play-Ways," and the recognition of the function of play in childhood has been one of the most striking advances in recent educational practice.

Now it is obvious that the conception of play which underlies these methods is totally inadequate as a basis for secondary work. Work and play in theory may be identified, but in practice there is a real enough distinction though it may challenge definition. Without attempting to discuss the work-play problem as a whole, I think we may easily conclude what makes the play ideal inadequate for secondary education. Our life is not lived under "natural" conditions. Civilization demands of us a modification of our instinctive impulses and a shaping of our conduct to conform with its own standards. We need such knowledge as will mediate our adjustment to a highly complex social and moral environment. Consequently, if we are to take our place successfully in our world, play, which in a broad sense is an unconditioned activity, must be supplemented by activities with a rather different affective tone, activities which go by the general name of work. The function of work is to turn children into men. It will be noted that children turn into men during the secondary school period.

* Described in Dewey: "Schools of To-morrow."

Bagley* has an analysis which illuminates the point at issue. In dealing with the problem of apperception and interest, he comes to the conclusion that a valid distinction can be made between, on the one hand, primitive needs accompanied by primitive interest, and by what he calls "primary passive attention," and, on the other, acquired needs. Acquired needs must be attended to in the first place by means of "active attention," but since prolonged active attention is impossible, it will in due course, if sufficient effort is put forth, pass into "secondary passive attention," which is accompanied by "acquired interest." Two of Bagley's conclusions will point the way to our own. "So long as the pedagogical doctrine of interest meant the following of the lines of least resistance," he writes, "its failure as an educational principle was absolutely certain. . . . But if the interest means the desire for the satisfaction of acquired needs, the case is somewhat different." Again, "work is biologically the central feature of education." From the point of view here propounded, Bagley is to the point, but too sweeping. What he says is true of secondary education, while we should prefer to agree with Rousseau and the whole company of exponents of the "Play-way" that childhood has a value of its own, and that of childhood, play is biologically the central feature. We have, in fact, arrived at a fuller meaning for our common terms; primary education, the education of childhood, means attention to primary needs; secondary education, the education of adolescence, is a response to acquired or secondary needs.

What, then, is the significance of this conclusion for our thesis? Simply that acquired needs must be acquired and not imposed, and that acquired interest must be none the less spontaneous when it comes. Though work will be the central feature of secondary education, its function will not be fulfilled unless it truly subserves valuable acquired interests. The interest in avoiding penalties, which arises when work is prescribed and enforced by external authority, must inevitably not only not assist, but also actively hinder the achievement of true acquired interests which will mediate the development of manhood. Thus, while we cannot regard the cruder manifestations of the "Play-way" as offering any foundation for a sound secondary course, there is clearly a place for a method

* In "The Educative Process."

which will invest work with the essential qualities of spontaneity and worthwhileness. That place the principles here described can fill.

NOTE.—The only other published account of this work will be found in the *Mathematical Gazette*, and is a reprint of a lecture delivered to the Mathematical Association on 7th January, 1930, by Mr. G. W. Spriggs, M.Sc., F.C.P. This examines especially the relation of prospectant education to the school study of mathematics. In addition, there are the following unpublished general accounts, both of which are considerably fuller than the present article :

A. D. Hewlett : "Beyond the Dalton Plan," in the London University Library, and in the library at the London Day Training College ;

G. W. Spriggs : "Prospective Education," in the library of the College of Preceptors.

In these will be found details and illustrations of our practice, though it is important to remember that this has since undergone development, and is still developing.

Dates versus Centuries in Teaching Chronology to School Children.

BY W. H. WINCH.

PART II.

III.—A SECOND EXPERIMENT IN A GIRLS' SCHOOL.

THE school in which this experiment was conducted was a municipal school situated in a south-eastern suburb of London. The girls attending it belonged to the lower middle class, and were not well-to-do. But they made a good show, and were intelligent children, though not, in most cases, capable of very strenuous and prolonged mental endeavour. They were, on the basis of results from my reasoning tests, distinctly in advance of the girls of the school in which the first experiment was made. The method adopted was, as before, that of equal and parallel groups.

(I) THE CHILDREN WHO DID THE WORK.

The work was undertaken by the whole of the first, or Standard VII, class. Two or three weeks prior to the experiment, a number of girls had been promoted from the second, or Standard VI class, and we have continued to call them Standard VI. I may mention at once that not only in the preliminary tests on the basis of general chronological knowledge of English history did they show themselves inferior to the Standard VII children—that was, indeed, to be expected—but, in nearly every case, they did not acquit themselves so well in the final tests after the special lessons which were given to the two groups—a testimonial to the good grading of the school. The experiment began with forty-six girls, two of whom left the school through removal whilst the preliminary tests were in progress. A special register of attendances was kept during the history lessons and the study periods which followed the division into two equal and parallel groups. Two of the girls were away so much that it was useless to continue to tabulate their work in the group, and these absences also, of course, caused the exclusion from our tabulation of the two children in the other group who were paired with them, and there were one or two others whom we could not pair. Then Emily C. and Marjorie P. left the school, they were over-age, they happened to be numbers 1 and 2 of the “date group,” consequently two girls at the top of the “centuries group”

were omitted from the tabulations, though, of course, all girls remaining in the class continued to do the work. Then another girl fractured her arm, and she and her paired associate had to be excluded from the tabulations. But there was a feature of the conduct of this experiment which must be accounted for. We were anxious not to give more prominence than we could help to the history experiment, so we alternated the history lessons with arithmetical exercises, keeping a special attendance register and a record of the sums done correctly in each lesson, and, moreover, telling the children the results before the beginning of the next arithmetic lesson. The arithmetic lesson was conducted by the head mistress. The history lessons were entirely oral, and there was no testing during the course.

(2) THE PRELIMINARY TESTS.

These were, as before, tests in the chronological aspect of history. A number of outstanding events or persons—ten in each test—were selected, and so selected in most cases that the girls had previously been taught about them at some period during their school career, though not exclusively so, for a few outstanding events, such as the Battle of Trafalgar and the beginning of the Great War, which had not been dealt with in the class teaching, were included.

One of the questions of Test I ran :

- (a) At what date did the Great Fire of London take place?
- (b) In what century did it happen?
- (c) Give any other way in which you can tell the time of the event.

Other questions were about Magna Carta, the First Parliament, the Spanish Armada, the Petition of Right, Joan of Arc, the Capture of Quebec, Thomas-à-Becket, the Battle of Waterloo, Domesday Book, the Invention of the Steam Engine ; in all ten questions.

I may say at once that there were no answers to any questions in which the century was not given more accurately than the date, though this was a school in which the learning of “ dates ” (unlike the previous school, which favoured centuries) had been, with the exception of the Standard VI course, which used dates *grouped* in centuries, the chronological method. The answers to the (c) questions were received with some latitude. For example, “ When John was King of England,” “ When Simon Montfort lived,” “ When Charles I was King,” “ It was after the War with the Black Prince,” “ It was when General Wolfe was killed,” “ In the reign

of Henry II," "When Wellington was living," "In the time of William the Conqueror," "At the same time as George Stephenson," are all acceptable answers.

(3) THE TEACHING OF THE TWO GROUPS.

The lessons given were: The Romans in Britain, King Alfred, his Life and Times; How Duke William became King of England; the Feudal System—(a) Magna Carta, (b) the Wars of the Roses; the Hundred Years War with France; Henry VIII; the Age of Elizabeth. These lessons were chosen because we wished all the girls, as far as possible, to be in an equally favourable position, as far as an opportunity for previous knowledge was concerned. We did not adopt the method of the previous experiment in choosing topics on which they were fairly certain to have no knowledge of any kind. The lessons were to be entirely oral, the appropriate map was to be placed before the class in every lesson, the teacher was to point to the place and pass on, they were not to be lessons on geography. A few minutes at the end of each lesson were to be left for notes, which the teacher dictated, and these were exactly the same, except in one respect; Group A included the date of the event, and only the date; Group B had the century and part of the century, e.g., early—middle—late.

The children's notes on the lesson on "The Age of Elizabeth" were, for Group A:

A.D. 1558-1603.

Elizabeth, advised by William Cecil, Lord Burleigh, enforced the Protestant Religion—Act of Uniformity—English Church established.

The defeat of the Spanish Armada checked Spanish power, and made England respected as a sea power.

Elizabeth's reign was a time of national awakening.

Drake and Grenville were daring sailors.

Raleigh was a pioneer in the New World.

Shakespeare, our greatest poet, lived at this time.

The date chart for this group showed the accession and death of Elizabeth, the Act of Uniformity, the Defeat of the Spanish Armada, and the birth and death of Shakespeare.

The notes for the century group were precisely the same, except that there were no dates used, and that the events were set out thus:

| | <i>Early.</i> | <i>Middle.</i> | <i>Late.</i> |
|----------------------|---|-------------------------------------|--|
| <i>16th Century.</i> | Henry VIII. Fall of Wolsey. Act of Supremacy. | Elizabeth. Act of Uniformity. | Shakespeare born Defeat of Spanish Armada. |
| <i>17th Century.</i> | Elizabeth died. Shakespeare died. | | |

Group A made a chart showing the dates only in sequential order, but with no spacing ; and they were in no case to be taught how to find the century from the date.

Group B made a chart showing centuries only, with spacing and the placing the event at the beginning, middle, or end of the space allotted to the century. All text-books in history, historical readers, pictures, or other historical material were removed, as in the previous experiment, whilst the experiment lasted, and, of course, the children's own notes and charts were collected at the end of each lesson. The teaching was done by the teacher of the First Class (Standard VII), who had a competent knowledge of history, but she had had no previous experience in experimental work. The whole of the work was supervised by the head mistress, who had had many years' experience of experimental pedagogy.

(4) THE FINAL TESTS.

The final tests were set by me on the basis of the children's notes. The chronological questions were similar to those asked in the preliminary tests, with the exception that we now asked for the part of the century as well as for the century itself. Thus the questions on the Romans were :

- (a) At what date did the Romans begin to occupy Britain, and when did they leave it ?
- (b) In what century and in what part of the century did the Romans begin to occupy Britain, and in what century and in what part of the century did they leave it ?
- (c) Give any other way in which you can tell the time of the Roman occupation of this country. (This section of the questions was regarded as being answered by such sentences as " Before Christianity came to this country," or " At the time of the Ancient Britons.")

Questions of a similar nature were set on each of the eight lessons which had been given. I may say at once that very, very few who could put the century correctly could not also put the part of the century, and this was true of both groups. The century group completely failed in the dates, as was to be expected (they had not been taught them, though, in one lesson, a child asked for the exact date, it was that of the Battle of Bosworth). And the date group failed relatively in the centuries, though they did the dates themselves extremely well.

The questions in historical knowledge, other than chronological, to be answered cursively, were :

- (1) Write about the Romans in Britain.
- (2) Write about how William, Duke of Normandy, became King of England.
- (3) Who was Joan of Arc, what did she do ?

The answers were marked on points. Every correct and relevant historical assertion earned one mark, provided it was not a repetition in other words of what had been said before.

The questions in historical knowledge, other than chronological, to be answered in a word or a sentence, were :

- (1) What people did King Alfred fight against ?
- (2) Name the great statesman who helped Henry VIII.
- (3) Name three great men who lived in the time of Queen Elizabeth.
- (4) Name the greatest Baron who fought in the Wars of the Roses.
- (5) Give an important enactment of Magna Carta, only one is required.
- (6) Who won the Battle of Agincourt ?
- (7) Who was the English king when Duke William came to England ?
- (8) Who was Boadicea ?

The great advantage of questions like these is that they are easy to mark, but they have certain disadvantages which induce me to retain connected answers on a single topic, as in the questions to be answered cursively.

(5) A CHRONOLOGY OF THE EXPERIMENT.

1927.

- | | |
|----------------------|--|
| Wednesday, May 18th. | First Preliminary Test in Chronology began at 11-5 a.m. There was no time limit, the first girl finished at 11-35 a.m., the last at 11-46 a.m. |
| Friday, May 20th. | Second Preliminary Test in Chronology began at 11-5 a.m. The first girl finished at 11-25 a.m., the last at 11-33 a.m. |

Wednesday, May 25th. Third Preliminary Test in Chronology began at 11-5 a.m. The first girl finished at 11-15 a.m., the last at 11-25 a.m.

Friday, May 27th. Fourth Preliminary Test in Chronology began at 11-5 a.m. The first girl finished at 11-17 a.m., the last at 11-27 a.m.

On the results of these tests the girls were divided into two equal and parallel groups. Lessons in History were given on :
1927.

Wednesday, June 8th. Group A, 10- 0 a.m. to 10-35 a.m.

„ „ 8th. „ B, 10-50 a.m. „ 11-25 a.m.

Tuesday, „ 14th. „ B, 10- 0 a.m. „ 10-35 a.m.

„ „ 14th. „ A, 10-50 a.m. „ 11-25 a.m.

and so on, Groups A and B alternating in time, on Thursday, June 16th, Wednesday, June 22nd, Friday, June 24th, Tuesday, June 28th, Wednesday, June 29th, and Tuesday, July 5th.

It will be seen that the lessons were not unduly hurried. Then two study periods were given on :

Wednesday, July 6th. Group A, 10- 0 a.m. to 10-35 a.m.

„ „ 6th. „ B, 10-50 a.m. „ 11-25 a.m.

Friday, „ 8th. „ B, 10- 0 a.m. „ 10-35 a.m.

„ „ 8th. „ A, 10-50 a.m. „ 11-25 a.m.

The Final Tests to both groups in one room, Group A on one side of the room, and Group B on the other side of the room, were given on :

Tuesday, July 12th. The Chronological test began at 10-0 a.m. The first girl finished at 10-25, the last at 10-35 a.m.

The Historical questions to be answered cursively began at 10-55 a.m. The first girl had finished at 11-30 a.m., the last at 11-50 a.m.

Wednesday, July 13th. A test by means of Historical questions, such as could be answered in a word or a sentence, began at 10-5 a.m. The first girl had finished at 10-20 a.m., the last at 10-30 a.m.

These tests concluded the experiment, which lasted from May to July, and had certainly not been pressed forward at too rapid a pace.

VI RESULTS.

TABLE III.—SHOWING THE INDIVIDUAL MARKS FOR FOUR
CHRONOLOGY AND HISTORICAL KNOWLEDGE

GROUP A.—THE DATE GROUP.

| Names (initials only). | School Stan- dards. | Age on 18.5.27 ys. mth. | Totals of Four Preliminary Tests in Chronology. | | | Total Marks for Chrono- logy Pre- lim'y Tests. | Marks for Final Test in Chronology. | | | Total Marks for Chrono- logy Final Test. | Marks for Historical Knowledge. | | T. M. / H tor K lec |
|------------------------------|---------------------------|--------------------------------------|---|-----------------|--------------------|---|--|-----------------|-------------------|--|---------------------------------------|-----------------|------------------------------------|
| | | | Dates. | Cent- uries. | Allied. Events. | | Dates. | Cent- uries. | Allied Events. | | Short Ans. | Cursive Ans. | |
| M.V. .. | VII | 12.6 | 9 | 19 | 30 | 58 | 10 | 4 | 7 | 21 | 8 | 36 | 44 |
| V.C. .. | VII | 12.8 | 9 | 20 | 11 | 40 | 5 | 0 | 2 | 7 | 7 | 24 | 38 |
| M.R. .. | VII | 13.6 | 7 | 21 | 11 | 39 | 7 | 0 | 3 | 10 | 3 | 35 | 38 |
| M.T. .. | VII | 13.7 | 8 | 19 | 11 | 38 | 10 | 7 | 7 | 24 | 9 | 45 | 55 |
| M.M. .. | VII | 12.11 | 7 | 15 | 3 | 35 | 8 | 7 | 3 | 18 | 8 | 20 | 29 |
| F.B. .. | VII | 13.8 | 7 | 13 | 13 | 33 | 10 | 6 | 5 | 21 | 9 | 32 | 44 |
| N.G. .. | VII | 14.2 | 7 | 13 | 13 | 33 | 7 | 5 | 5 | 17 | 5 | 47 | 55 |
| A.S. .. | VII | 13.3 | 6 | 16 | 9 | 31 | 8 | 5 | 4 | 17 | 4 | 26 | 38 |
| J.O. .. | VI | 13.4 | 3 | 13 | 12 | 28 | 9 | 6 | 7 | 22 | 8 | 47 | 55 |
| D.W. .. | VI | 10.9 | 0 | 11 | 13 | 24 | 7 | 3 | 6 | 16 | 7 | 39 | 44 |
| E.H. .. | VII | 13.7 | 3 | 14 | 4 | 21 | 7 | 1 | 2 | 10 | 5 | 44 | 44 |
| E.D. .. | VI | 11.2 | 4 | 9 | 6 | 19 | 5 | 3 | 6 | 14 | 6 | 35 | 44 |
| N.G. .. | VI | 13.9 | 0 | 6 | 9 | 15 | 6 | 3 | 5 | 14 | 7 | 43 | 44 |
| V.F. .. | VI | 13.1 | 3 | 5 | 5 | 13 | 6 | 3 | 1 | 10 | 5 | 26 | 38 |
| M.H. .. | VI | 12.9 | 1 | 5 | 6 | 12 | 5 | 6 | 5 | 16 | 6 | 25 | 38 |
| H.M. .. | VI | 12.0 | 2 | 6 | 2 | 10 | 6 | 0 | 0 | 6 | 3 | 8 | 11 |
| T.C. .. | VII | 13.1 | 4 | 5 | 1 | 10 | 7 | 0 | 2 | 9 | 7 | 49 | 55 |
| L.E. .. | VI | 13.3 | 1 | 3 | 4 | 8 | 4 | 7 | 1 | 12 | 7 | 15 | 29 |
| Averages | | 12.11.2 | 4.5 | 11.8 | 9.6 | 25.9 | 7.1 | 3.7 | 3.9 | 14.7 | 6.3 | 33.1 | 39 |

We may notice, before applying any exact statistical formulæ, certain outstanding characteristics of the above table. The first point of importance is not the absolute failure of the "century group" in the final tests of dates; that was, of course, to be expected, since they had been taught the century, not the date, and they acquitted themselves just as well with their "centuries" as the "date group" did with their dates; but, in spite of a most careful abstention in the final teaching from showing the relation between the date and the century, the date group has made a fair show, not a good one, in their knowledge of centuries. In knowledge of the other chronological determinants there does not appear to be any real advantage in either method; there is a slightly better average on the century side, but as this group was slightly better in this respect

VI. RESULTS.

PRELIMINARY TESTS IN CHRONOLOGY, AND FOR THE FINAL TESTS IN OF GROUPS A. AND B. RESPECTIVELY.

GROUP B.—THE CENTURY GROUP.

| Names (initials only). | School Stan- dards. | Age on 18.5.27 ys. mth. | Totals of Four Preliminary Tests in Chronology. | | | Total Marks for Chrono- logy Pre- lim'y Tests. | Marks for Final Test in Chronology. | | | Total Marks for Chrono- logy Final Test. | Marks for Historical Knowledge. | | Total Marks for His- torical Know- ledge. |
|------------------------------|---------------------------|----------------------------------|---|-----------------|-------------------|---|--|-----------------|-------------------|--|---------------------------------------|-----------------|---|
| | | | Dates. | Cent- uries. | Allied Events. | | Dates. | Cent- uries. | Allied Events. | | Short Ans. | Cursive Ans. | |
| R. .. | VII | 13 · 2 | 10 | 26 | 19 | 55 | 1 | 10 | 4 | 15 | 9 | 47 | 56 |
| J. .. | VII | 11 · 2 | 7 | 18 | 18 | 43 | 0 | 10 | 6 | 16 | 8 | 39 | 47 |
| V.C. .. | VII | 13 · 11 | 8 | 18 | 14 | 40 | 0 | 1 | 2 | 3 | 7 | 25 | 32 |
| G. .. | VII | 13 · 9 | 10 | 18 | 11 | 39 | 0 | 8 | 3 | 11 | 6 | 22 | 28 |
| B. .. | VI | 14 · 0 | 3 | 20 | 14 | 37 | 1 | 10 | 7 | 18 | 9 | 38 | 47 |
| D. .. | VII | 13 · 3 | 6 | 16 | 12 | 34 | 0 | 5 | 6 | 11 | 5 | 34 | 39 |
| G. .. | VII | 13 · 1 | 4 | 18 | 8 | 30 | 0 | 7 | 5 | 12 | 8 | 43 | 51 |
| H. .. | VII | 13 · 8 | 3 | 12 | 14 | 29 | 0 | 9 | 6 | 15 | 8 | 40 | 48 |
| R. .. | VII | 13 · 7 | 8 | 13 | 8 | 29 | 0 | 8 | 3 | 11 | 7 | 32 | 39 |
| H. .. | VI | 12 · 6 | 0 | 13 | 13 | 26 | 0 | 10 | 7 | 17 | 8 | 41 | 49 |
| H. .. | VI | 11 · 10 | 3 | 7 | 11 | 21 | 0 | 7 | 4 | 11 | 7 | 34 | 41 |
| P. .. | VI | 11 · 5 | 3 | 8 | 8 | 19 | 0 | 8 | 8 | 16 | 7 | 41 | 48 |
| J. .. | VI | 13 · 9 | 3 | 6 | 6 | 15 | 0 | 6 | 2 | 8 | 6 | 30 | 36 |
| W. .. | VI | 13 · 1 | 3 | 7 | 3 | 13 | 0 | 7 | 2 | 9 | 3 | 23 | 26 |
| P. .. | VI | 11 · 0 | 1 | 3 | 8 | 12 | 0 | 5 | 6 | 11 | 7 | 36 | 43 |
| M. .. | VI | 12 · 2 | 3 | 5 | 4 | 12 | 0 | 8 | 2 | 10 | 7 | 20 | 27 |
| S. .. | VI | 14 · 0 | 3 | 2 | 4 | 9 | 0 | 5 | 2 | 7 | 9 | 29 | 38 |
| L. .. | VI | 13 · 5 | 1 | 4 | 2 | 7 | 0 | 6 | 1 | 7 | 1 | 16 | 17 |
| Averages | | 12 · 11 · 2 | 4 · 4 | 11 · 9 | 9 · 8 | 26 · 1 | 0 · 1 | 7 · 2 | 4 · 2 | 11 · 6 | 6 · 8 | 32 · 8 | 39 · 6 |

*This girl fractured her arm during the experiment.

in the preliminaries, the difference is probably not statistically valid. But has the advantage on the side of the “date group” been obtained by greater mental effort? Are the dates really harder to learn? If so, other parts of the historical lessons should have been acquired with less firmness. This does not appear to have been the case, since the marks added together of the short or one-word answers and the cursive historical answers (marked on points) amount to 39.4 for the “date group” and to 39.6 for the “century group.” It is not an absolutely fair conclusion, for the class was divided on chronological, and not on general historical knowledge, and it *may* not have been divided equally in the latter respect. Still, I think it is worthy of considerable attention.

TABLE, SHOWING SECTION BY SECTION, THE
 COMPARED IN THE PRELIM-

GROUP A.—THE DATE GROUP.

| Marks for Preliminary Tests. | No. of Cases. | Average Age on 18.5.27. yrs. mths. | Marks for Four Preliminary Tests. | | | | Marks for Final Test. | | | | Marks for Historical Knowledge. | | |
|------------------------------|---------------|---------------------------------------|-----------------------------------|------------|----------------|---------|-----------------------|------------|----------------|---------|---------------------------------|--------------|---------|
| | | | Dates. | Centuries. | Allied Events. | Totals. | Dates. | Centuries. | Allied Events. | Totals. | Short Ans. | Cursive Ans. | Totals. |
| 35 & over | 5 | 13 · 0 · 4 | 8 · 0 | 18 · 8 | 15 · 2 | 42 · 0 | 8 · 0 | 3 · 6 | 4 · 4 | 16 · 0 | 7 · 0 | 32 · 0 | 39 · 0 |
| 20 to 35 | 6 | 13 · 1 · 5 | 4 · 3 | 13 · 3 | 10 · 7 | 28 · 3 | 8 · 0 | 4 · 3 | 4 · 8 | 17 · 2 | 6 · 3 | 39 · 2 | 45 · 5 |
| Below 20 | 7 | 12 · 8 · 9 | 2 · 1 | 5 · 6 | 4 · 7 | 12 · 4 | 5 · 6 | 3 · 1 | 2 · 9 | 11 · 6 | 5 · 9 | 28 · 7 | 34 · 6 |

The usual Statistical Calculations follow :

| | " r " | Mean Difference. | P.E. of Mean Difference. |
|---|-------|------------------|--------------------------|
| GROUPS A AND B.—Preliminary Dates..... | ·74 | ·1 | ·34 |
| " " " Centuries | ·87 | ·1 | ·60 |
| " " " Associated Events | ·73 | ·2 | ·67 |
| " " " Totals | ·99 | ·2 | ·27 |
| GROUPS A AND B.—Final Dates | ·40 | 7 · 0 | ·27 |
| " " " Centuries | ·19 | 3 · 5 | ·49 |
| " " " Associated Events | ·40 | ·3 | ·38 |
| " " " Totals | ·32 | 3 · 1 | ·87 |
| GROUPS A AND B.—Historical Knowledge (short answers)..... | ·03 | ·5 | ·43 |
| " " " " (cursive answers) | ·29 | ·3 | 1 · 9 |
| " " " Total of Short and Cursive Answers..... | ·31 | ·2 | 2 · 1 |

AVERAGE MARKS OF GROUPS A AND B,
 PRELIMINARY AND FINAL TESTS.

GROUP B.—THE CENTURY GROUP.

| Marks for Preliminary Tests. | No. of Cases. | Average Age on 18.5.27. yrs. mths. | Marks for Four Preliminary Tests. | | | | Marks for Final Test. | | | | Marks for Historical Knowledge. | | |
|------------------------------|---------------|---------------------------------------|-----------------------------------|------------|----------------|---------|-----------------------|------------|----------------|---------|---------------------------------|--------------|---------|
| | | | Dates. | Centuries. | Allied Events. | Totals. | Dates. | Centuries. | Allied Events. | Totals. | Short Ans. | Cursive Ans. | Totals. |
| 5 & over | 5 | 13 · 2 · 4 | 7 · 6 | 20 · 0 | 15 · 2 | 42 · 8 | 0 · 4 | 7 · 8 | 4 · 4 | 12 · 6 | 7 · 8 | 34 · 2 | 42 · 0 |
| 10 to 35 | 6 | 12 · 11 · 8 | 4 · 0 | 13 · 2 | 11 · 0 | 28 · 2 | 0 · 0 | 7 · 7 | 5 · 2 | 12 · 8 | 7 · 2 | 37 · 3 | 44 · 5 |
| below 20 | 7 | 12 · 8 · 3 | 2 · 4 | 5 · 0 | 5 · 0 | 12 · 4 | 0 · 0 | 6 · 4 | 3 · 3 | 9 · 7 | 5 · 7 | 27 · 9 | 33 · 6 |

IV.—A THIRD EXPERIMENT IN A BOYS' SCHOOL.

This was carried out on the lines of the first experiment by Mr. P. F. Nisbett and Mr. H. Bloom with the whole of the first and second classes of a "very poor" boys' school in the east-end of London. The results (hitherto unpublished) were similar to those described above, and the authors have kindly permitted me to make this reference to them.

V.—SUMMARIZED CONCLUSIONS.

- (1) That a much greater aggregate of chronological knowledge is obtained by teaching dates rather than centuries.
- (2) That dates are as readily learnt as centuries.
- (3) That this result is not due to a greater absorption of mental energy ; since, in general historical knowledge (apart from chronology) acquired during the lessons, one group is as proficient as the other.

The Efficiency of Competitive Scholarship Examinations of Young Children, with Particular Reference to the Effect of an Age Allowance.

BY B. C. WALLIS.

IN order to select 100 children to proceed with scholarships from the elementary to the secondary school approximately 1,000 children are submitted to a competitive examination composed of four tests. The children are of the age "11 plus," and they receive an award on the single ground that their competition score is equal to, or exceeds, that of the child who is No. 100 in the final order of merit. The verdict of the examiner is an unique judgment, a comparative estimate of each set of examinees. If the thousand candidates are previously estimated to fall within the top, or most able, 10 per cent of their age group, then it is a fairly safe assumption that the children who gain an award fall within the top 1 per cent of their age group, i.e., they are children whose I.Q. is of the order 150-160.

The final competitive score is a total of four separate scores and is of the same nature as the statistician's "weighted average." It is essentially the considered judgment of one individual and is inevitably "weighted" by the unconscious bias of this individual, as well as by his plans which are limited by the prescribed conditions of the competition.

The problem here considered is two-fold; primarily it relates to the question of the possibility of determining from the internal evidence supplied by the recorded scores whether the competition has a measurable degree of reliability, i.e., whether the methods adopted by the examiner are, as a whole, satisfactory; and, finally, it concerns the important question as to whether an age allowance is desirable in principle. Parenthetically, it may be noted that when the successful candidates fall within the top 1 per cent of an age group this question of an adequate age allowance presents almost a virgin field to the investigator.

Usually, the test of the reliability of examination scores involves the calculation of the coefficients of correlation between the tests used. Here a different method is suggested. Attention is concentrated upon the scores of the successful children and the degree of correlation between the scores of all the candidates is ignored as being accidental to this discussion. In this connection the scores of the candidates who are not in the running for an award are of no importance.

The details which follow have been taken from the examination scores of a set of boys ; for convenience of exposition they have been slightly “ smoothed.”

The boys were submitted to four tests, their scripts were assessed numerically in order to obtain an order of merit on each test. The top 100 on each test were labelled I (In) and the rest O (Out). The score of each boy now appeared as one of the following arrangements :

| | | | | | | | |
|------------------------------------|----|----|----|----|----|----|--------------|
| IIII | .. | .. | .. | .. | .. | .. | Type, 4 I's. |
| IIIO, IIOI, IOII, OIII | .. | .. | .. | .. | .. | .. | „ 3 I's. |
| IIOO, IOOI, IOIO, OIIO, OIOI, OOII | .. | .. | .. | .. | .. | .. | „ 2 I's. |
| OOOI, OOIO, OIOO, IOOO | .. | .. | .. | .. | .. | .. | „ 1 I. |
| OOOO | .. | .. | .. | .. | .. | .. | „ No I's. |

i.e., one of the 16 possible scores ; 4 I's, 4 types of 3 I's, 6 types of 2 I's, 4 types of one I, and 4 O's.

The scores of the top 100 on the whole examination were now abstracted from the final order of merit list and the following facts concerning these top 100 were observed :

- (1) Sixty boys scored I, and 40 scored O, on each of the four tests ; one group of 60 boys scored I on the first test, a different group of 60 boys scored I on the second test, and so on.
- (2) Thirty-six boys scored II on any pair of tests ; six different groups of 36 scored II, one group scored I on test 1 and on test 2, another group scored I on both test 1 and test 3, and so on.
- (3) Each of the possible types of 2 I's, IIOO, etc., occurred the same number of times.
- (4) Each of the four possible types of 3 I's, as well as each of the four possible types of one I, was scored equally frequently.

The symmetry of these facts suggests the following conclusions :

- (a) Each test worked as efficiently as any of the other three tests.
- (b) The character of each test may be summarized by the phrase “ three out of five chosen correctly.”

Parenthetically, it may be noted that this symmetry continued among the candidates below the top 100 on the final order of merit.

Since one of the tests was an essay or composition exercise and another a set of searching problems in arithmetic, it may be concluded that in this case ability as measured by essay scores counted equally with ability to solve problems in arithmetic.

Now leave examination tests for a moment and consider what would be likely to happen if four equally capable judges were required to pass in review the merits of some thousand footballers, and to select from them the top 100 ; suppose that the selective ability of each of the judges was indicated by the phrase " three out of five chosen correctly."

Of the final 100, sixty would be labelled I and forty labelled O. Of the sixty labelled I by Judge A, thirty-six would also be labelled I by Judge B, and twenty-four would be labelled O by Judge B. Of the thirty-six labelled II by Judges A and B, twenty-two would also be labelled I by Judge C. Of the twenty-two labelled III by Judges A, B, and C, thirteen would be labelled I by Judge D.

(a) Of the top 100, thirteen would be labelled IIII (13 per cent.= the fourth power of 60 per cent.). Of the forty labelled O by Judge A, 22 per cent. would be labelled I by each of the other three judges. Nine would be labelled OIII. Nine players would be found in each of the four types of 3 I's (22 per cent.=the third power of 60 per cent.).

(b) Of the top 100, thirty-six would be labelled with 3 I's and one O.

(c) Similarly, it may be concluded that thirty-six would be labelled with 2 I's and 2 O's (36 per cent.=the second power of 60 per cent. ; 16 were labelled O by both Judge A and B ; 36 per cent. of 16=6 ; so that there would very probably be six players with each of the six types of 2 I's).

(d) This would leave, out of the 100, fifteen players each chosen by one only of the four judges.

These considerations lead to the summary : Four I's 13 ; three I's 36 ; two I's 36 ; one I 15.

Reverting to the examination results it is found that the summary of the examination scores was : Four I's 16 ; three I's 28 ; two I's 48 ; one I 8.

The conclusions to be drawn from the divergence between these two summaries would seem to be :

- (1) The tests were individually of the character " three out of five chosen correctly."
- (2) The examiner's system of " weights " appeared to break down in producing a preponderance of two I's.

A possible explanation of the divergence may be hazarded. The tests worked in pairs ; of the thirty-six children who scored I on both tests 1 and 2, those who scored I on one of the other tests were rather more likely to score I also on the fourth test, while those

who scored O on a third test were equally rather more likely to score O on the fourth test. This circumstance becomes quite probable when it is noted that the four tests given were two in arithmetic and two in English.

But there occurred in the examination a disturbing factor of another kind ; this was an age allowance which definitely altered the *personnel* of the children at the lower end of the award list.

For purposes of confirmation the scores of a similar examination by four similar tests given to children in a different part of England were examined. Briefly, the results of this scrutiny were :

- (1) Similar symmetry between the tests.
- (2) The tests were of the character indicated by " five out of nine chosen correctly."
- (3) The results were (theoretical or calculated results being shown in parentheses) : four I's 12 (10) ; three I's 26 (30) ; two I's 45 (36) ; one I 10 (19) ; no I's 7 (5).

These results suggest a similar tendency towards an excess of two I's.

In connection with this second examination the effects of the age allowance were investigated. The age allowance brought into the top 100 five boys who were otherwise " out " (all with two I's) in place of five boys (three with two I's, and two with one I).

Since the boys were all within a six months age group, ideally it should happen that the top 100 should include sixteen or seventeen of each age month. Actually, in this case, the top 100 included sixteen or seventeen of each of the four middle months, but only seven of the youngest month and twenty-seven of the oldest month. A similar tendency towards a paucity of the youngest had been discovered in previous investigations into " age allowances " in this area ; and the result showed that the tendency persists despite special efforts to secure attendance at the examination of an adequate proportion of the youngest boys.

A further step was taken. The scores were analysed in such a manner as to isolate the six separate groups of boys born in each of the months. The top sixteen or seventeen in these groups were then combined into a new order of merit list of the top 100.

This procedure obviously displaced ten of the twenty-seven oldest in favour of ten youngest who were added to the original seven. All these twenty boys scored either two I's or one I. They were roughly of equal merit and an adequate " age allowance " should have brought the youngest in and left the oldest out. To do this would have entailed an age allowance of twice the magnitude

of that actually used. Such a large allowance proportionately administered for the four middle months would, however, have occasioned a new set of discrepancies.

The conclusion to which these circumstances point is that probably the wisest course to adopt is to keep the children in separate groups of no more than one month in age range and to let these groups compete separately ; i.e., when the children have an age range of a year there should be twelve separate competitions, one for each month.

It would appear that competition scores of the character here considered belong to what may be termed " first order of magnitude " variations, while " age allowances " by means of added numbers are " second order of magnitude " variations. Similar " second order " differences originate in (1) the examiner's choice of questions ; (2) the examiner's schedule of marks ; (3) the selection of the standard curve of distribution to which all scores are adjusted ; and (4) the chance variation of the actual performance of each child in comparison with his normal performance.

It would seem wise, in the interest of justice, to remove the age allowance from a secondary to a primary significance.

No practical convenience in administration should be deemed worthy of consideration in relation to so obvious an injustice to the children.

The Subconsciousness and the Acquirement of a Second Language.

The Conditions of most Effective Work.

BY WILLIAM PHILLIPS.

PART I.

IN a recent number* of the FORUM OF EDUCATION I had an opportunity of considering some of the conditions under which a teacher can secure the most effective co-operation from the child in the learning and mastering of the mother-tongue and, especially, the second and subsequent languages studied. In regard to the latter, I ventured to submit three recommendations :

- (1) That the teacher should not only select but also organize and classify the linguistic materials he supplies to his pupils, and so facilitate the work done by the subconscious in absorbing and retaining them, and help it in its own organization of them, so that the risk of its distorting them may be considerably decreased ;
- (2) That the teacher should present the statements, commands, etc., which he wants children to learn, in appropriate "situations" ; the great importance of this is being increasingly noted by language teachers, and the temptation to have recourse to vernacular explanations and translations is thereby weakened :
- (3) That the teacher must make provision for the constant recapitulation, and, as time goes on, an increasing application of what has been taught.

In view of the fact that many more schools in the British Isles, perhaps thousands more, will soon be trying to teach at least one other language besides English, I am emboldened to submit to my readers, for their consideration, an elaboration of the first recommendation made above, and to do this by reference to the problem of teaching Welsh to English-speaking children. It must be borne in mind that in towns like Newport and Cardiff, and in many parts of Wales, thousands of children do not know any Welsh. The task of making its study profitable to them during the years 7 to 15 is very difficult.

The English-speaking reader finds less common ground between his own tongue and Welsh than between English and French or English and German. This will, no doubt, somewhat increase the

* Vol. vii, pp. 141-145.

difficulty of studying this article ; yet, because a consideration of the methods of teaching such a language may, through its very contrasts, result in a clearer vision of the subconscious processes involved, I hope it will be of general interest to the teacher of any language.

It will be observed that the first recommendation follows, in regard to the subconscious, lines similar in one important respect to those adopted in the attempts made, through constant appeals to the learner's fully conscious and reflective mind, to teach him such a subject, for example, as Latin. Putting aside the various efforts made by a few reformers of Latin teaching to introduce the Direct Method, or modifications of it, we find that advantage has always been taken of and the main reliance placed on the labours of grammarians, and instead of introducing for three or four years Latin sentences and questions involving nouns belonging to all five declensions and verbs belonging to all four conjugations, without any attempt to concentrate attention upon only one of them for a considerable time before introducing the next, the work generally begins with the First Declension, and this for two reasons : firstly, because it contains many common words, and secondly because it is one of the least complex of the five, the Second and Third really consisting of several declensions each. A few forms of the verb "to be" and First Conjugation verbs, and some First Declension adjectives are next introduced. The other conjugations and declensions follow in due order and course. This method, even in the hands of a capable teacher, often failed to make the learning of Latin interesting, and was certainly not successful. Are we to conclude that such failure was due to the organization made of the linguistic material employed, or have we to seek the cause elsewhere ? I have not heard it suggested, even by the bitterest critics of the old methods, that the want of success that often followed their use was due to the fact that the highly complicated linguistic material that constitutes the Latin language had been systematized before even the first lesson was given. No one has hinted that special attention to one declension or conjugation (and, indeed, even to a part of one of these) at a time, makes the learning of each of the others more difficult, and no one has, so far as I know, said that although the result may be for a time advantageous, yet that, since Latin has in the end to be used without conscious reference to grammar or syntax, the possibility of a pupil doing so effectively is decreased by the fact that its difficulties have been attacked in detail. Nevertheless, a criticism of this nature has recently been directed against

an attempt made (in a scheme drawn up with reference to the teaching of Welsh on Direct Method lines) to apply this pedagogic principle of classifying difficulties, and grappling with them to a considerable extent separately.

The principle contained in the first recommendation has a parallel application in the teaching of geometry. It is to be noted that teachers of that subject are in increasing numbers realizing that the surest way of getting a child to understand geometrical problems is by giving him countless opportunities, by means of practical work of all kinds, to make himself acquainted with the properties of various geometrical figures. It would, however, seem to be contrary to all psychological laws for the teacher to ask a child to perform such work, and at the same time deliberately to decide that the tasks set shall be taken up in a totally unsystematic way. I do not mean that the pupil need be informed that the order in which they are dealt with is determined by a system, and he need not be told what its parts are: it is for some time enough that the teacher should be satisfied that the sequence in which the various tasks of measuring and constructing are to be done by the pupil will, at the proper season, enable the latter to understand the properties of one geometrical figure after another and to make more and more detailed statements concerning them. The teacher must therefore take advantage of the best systems of the best geometers, and arrange the tasks in a graduated and connected way, leaving the pupil's subconscious mind plenty of time to absorb it and organize it into various (loose) systems: on this basis and by the aid later of reflective work, it will be possible for him to build up a systematic knowledge of geometrical theorems. I shall, I think, not be considered rash if I forecast that teachers of geometry will in future devote much time to such a process of subconscious "incubation."

Welsh, although it belongs to the Aryan group, is in several respects very different from English. For the sake of readers unacquainted with Welsh who may be interested in the argument here advanced, it will be necessary to make several summary (but not, I hope, inaccurate) statements concerning certain grammatical and syntactical points. I shall start with three. (1) The Welsh finite verb is inflectional: *gwelais=vidi*=(I) saw. (2) Names of persons and animals are assigned, on the usual basis, to the masculine or feminine gender, but all thing-names are also, but on no basis now to be discovered, distributed between these same two genders. (3) A much more striking and fundamental feature is the series of

mutations undergone by nine consonants (*c* (= *k*), *p*, *t*; *g* (as in *get*), *b*, *d*; *ll*, *rh*, and *m*), when they occur as the initial consonants of certain words used in certain conditions. Three (*c*, *p*, *t*) have three mutations each, three (*g*, *b*, *d*) two each, and three (*ll*, *rh*, *m*) one each. The relevant conditions have been ascertained, and the laws relating to them formulated, so that the mutation (if any) required in a particular phrase or sentence can be ascertained in the light of full reflection. Let me give simple sentences to illustrate the three changes undergone by words beginning with *p*.

Let us take the word "*pabell*" "(a) tent." This is not a commonly-used word, but I introduce it here in order to simplify the discussion later on.

- (1) No change in *p*. *Pabell yw hon*. "Tent is this" (= This is a tent). *Hon* is a feminine demonstrative pronoun, like Latin *haec*.—*Gwelais* ("I saw") *saith* ("seven") *pabell*: "I saw seven tent" (= I saw seven tents).
- (2) Inter-vocalic or "soft" mutation of *p* to *b*.—*Gwelais babell*: "I saw (a) tent."
- (3) Aspirate mutation of *p* to *ph* (sounded *f*): *Gwelais ei* ("her") *phabell*: "I saw her tent."
- (4) Nasal mutation of *p* to *mh*.—*Gwelais fy* ("my") *mhabell*: "I saw my tent."

The "soft" change in (2) was originally due to phonological factors, but is stated to be due, as looked at from the point of view of modern Welsh grammar, to the fact that the noun immediately follows its transitive verb. The aspirate in (3) is due to the ending (now lost) of "*ei*." The nasal in (4) arose from the combination *n-p*, *fy* having once had a form like *men*; compare English "mine" (=my).

The reader will now have realized the nature of some of the main difficulties that confront the English-speaking pupil learning Welsh, difficulties that have to be faced by his teacher at the very outset. The latter may try to solve them in one of three ways: (1) He may make a direct appeal to the child's power of reasoning, and present to him that organization of the linguistic material which has already been prepared by the grammarians; this, as already said, was and is the usual method of teaching Latin; (2) he may present sentences of all kinds, dealing with situations as they naturally occur, without reference to any definite grammatical or syntactical scheme, but keeping in mind, when selecting the sentences to be taught, the pupil's stage of general apperceptive development; or (3) he may proceed on the lines stated in my recommendation (1).

It may appear to some impossible to teach such a language as Welsh to young English-speaking children at all. A consideration, however, of the facts which I now purpose setting before my reader will increase their confidence in the practicability of such a task. These will deal (1) with the manner in which consonantal mutations gradually developed in Welsh (I select the difficulty of training a child to use correctly-mutated words for special consideration because it is the greatest obstacle he has to overcome in his efforts to master Welsh : it goes without saying that other serious difficulties will be met by him), and (2) the way in which a child brought up in a Welsh-speaking home learns to speak Welsh and to make the necessary mutations without any serious difficulty.

A.—THE EVOLUTION OF THE WELSH MUTATIONAL SYSTEM.—A BRIEF STATEMENT.

(1) Consonantal changes, not only at the beginning, but also in other positions in a word, are a common feature of many languages. Grimm's Law is a well-known attempt at formulating a series of such changes sometimes (but in a complete degree rarely) seen in the Aryan group. A due consideration of these wonderful phonological changes (coming into being in almost entire independence of conscious direction, much less of considerations of meaning or grammar), will prepare us for the still more complete system of phonological changes seen in Welsh (and Irish) mutations.

(2) Original Celtic shows no trace of the latter.

(3) The date at which they appeared in Welsh and Irish can only be roughly determined ; it is fairly clear that they did not arise for probably more than a hundred years after the Romans had left this country. The influence or influences which set going these changes amongst a primitive people, for such the Welsh and Irish must at that time in the main have been, are unknown to us.

(4) We are quite in the dark too as to why they took one form in Irish and another in Welsh.*

* For instance, when a consonant, e.g., *p*, occurred between two vowels in a phrase in Early Celtic (I need not remind my readers that words *qua* words do not exist for primitive peoples), it became *b* in Welsh, and in Irish *ph* (=English *f*). The explanation of this lies in the fact that in such a syllable, for example, as *-apo-*, the vocal apparatus, and especially the vocal cords, have to assume a certain position in order to produce *a*, a considerably different one for *p*, and one very like the first for *o*. The consonant *p* (a surd mute) is flanked by the vowels *a* and *o* (sonant spirants), and so in order to bring the position of the vocal apparatus required to produce *p* nearer to that required for *a* and *o*, *p* could either become a sonant mute, that is, change into *b*, or become a surd spirant, that is, *ph*. Speaking generally, it may be said that the former became the rule in Welsh ; *apo* becoming *abo*, where *b*, a sonant (mute) lies between *a* and *o*, each being a sonant (spirant), and the latter in Irish ; *apo* became *apho*, *-ph*, a (surd) spirant, being flanked on each side by a vowel, a (sonant) spirant. (See Rhys, "Lectures on Celtic Philology," Second Edition, Lect. II. In Welsh, *n* and *s* did not mutate ; in Irish the former is slightly affected, while *s* becomes *h* (written *sh*).

Needless to say these changes when subjected to logical examination, are never found to be complete or consistent. In no part of Wales or Ireland are these mutations, as heard in the speech of even fairly educated people, carried out with complete consistency; even grammarians fail to agree about the rules to be used in regard to a few of them.

For the purpose of our discussion, it must not for a moment be forgotten that the persons in whose speech these sound changes first appeared were during many centuries after their first emergence totally unaware of their existence, and had no conception of the directions the various mutations were taking.

(5) I have thought it important to emphasize the view (accepted, so far as I know, without exception by those philologists who have considered the matter) that the marvellous system of Welsh consonantal changes was for a very long time a pure, though not necessarily complete, system of *sound*-changes, not dependent on variations in meaning and certainly not on grammatical and syntactical considerations. (These mutational phenomena can, I think, be brought into line with many of those on which the Gestalt Psychology rests.) The conscious mind did not participate in producing them. When one considers, however, what happened to *p* in *-apo-*, we are brought face to face with the phenomenon that this sound was not only influenced by that which preceded it, but also by the one that was to follow it, for when *p* was in Early Celtic followed by a consonant, it did not necessarily or ordinarily become *b*. Here, then, the vocal cords must be brought under control in such a way as to keep them in a position favourable to producing the about-to-be-uttered sound. We ascribe a capacity to the conscious mind of preparing for the future, and as we find in it no process or form of action which does not also exist, in a more or less undeveloped form, in the subconscious, we are led to postulate the possibility of the latter bringing its influence to bear on the brain when impressions from the auditory and vocal organs are received, and stimulations essential to placing the vocal cords in a position in which *b* (and not *p*) will be produced, and in retaining them in that position for the period of time necessary to the favourable emergence of *o*, have to be sent out.

(6) If we assume, as is sometimes done, that the force or forces which set going these consonantal mutations in Wales had commenced to operate before 600 A.D., and that the Welsh folk were in many parts of Great Britain still in a low state of civilization, it will be obvious that in considering the mutational and other

vital changes that took place in Welsh (say) between 600 A.D. and 1000 A.D., we must take into account the same general factors which, for example, gradually civilized the hosts of English invaders who came here and transformed the English dialects during that period. (We must, in addition, bear in mind the effects produced on some Welsh communities by the Roman occupation.)

We may safely say, for we are here supported by every study made of the growth of language, that as Welsh words and phrases grew in number, the subconscious mind displayed an increased activity, shown both in its organization of old material and also in its subjection of novel forms to analogical re-mouldings. Phonological processes became more and more stabilized; new linguistic material was not, however, for a long time yet, adopted and certainly not retained without its being brought into a shape consonant with such a stabilization, for the simple reason that it was being dealt with by a mind accustomed to deal with similar material in particular ways.

Before the Middle Ages were over, the form of consonants found in the middle, and in a slightly less degree, at the ends of individual words, had in the main taken the sounds they still retain. It is true that a word like "artistic" when borrowed into modern Welsh may become *artistig* (hard *g*), but when a word like "cinema" with *c* sounded *s*, is borrowed, it is pronounced "sinema," and the sound *m*, lying between the two vowels *i* and *e*, is not mutated into *f* ($=v$); at one time this change would have taken place; *m* in Latin *rem-us*, for example, became *f* in Welsh. Certain sporadic instances of the same activity may be seen in words borrowed to-day; e.g., bicycle may be pronounced *beisicl*, as in English, or *beisigl*. (This is a convenient opportunity for me to say again that this and similar statements are to be taken as only generally true; I have tried to refrain from bringing in so-called "exceptions," although some of them are important.)

Changes undergone by certain consonants occurring at the beginning of words became crystallized, and, as looked at from a grammarian's point of view, regular. No Welsh-speaking person to-day has to create a new type of mutation. He has, of course, when a Welsh word beginning with one of the nine mutable consonants has been heard in its unmutated or in one of the mutated forms, to use it sometimes in a context where a (by him) previously unheard form is required: by subconscious or conscious analogy he has to supply the required consonant, may be in the unmutated or may be in a particular mutated form. It is only by slow degrees

that he arrives at the stage, indeed he may never reach it, when, for example, the form *ci* ("dog") is given a more outstanding place in his mind than *gi* or *chi* or *nghi*, or *pabell* than *babell* or *phabell* or *mhabell*.

B.—(1) THE LEARNING OF WELSH BY A CHILD IN A WELSH-SPEAKING HOME.

The Welsh which the young child hears at home contains words which for various reasons begin with consonants that have undergone mutation. The mental tendencies to observe some or all forms of it exist alongside of others not to make any or to make the wrong change. The conditions governing the "soft" type have, in Anwyl's Grammar, to be placed in no fewer than twenty-nine divisions, and this classification does not pretend to be exhaustive. Other sentences which the child hears and imitates contain words modified according to the aspirate or nasal types; indeed, the same sentence may contain words whose initial consonants have assumed mutations of two or three such types. In addition, the home speech may also contain English words, whose initial consonants ought, if the appropriate rules were known and followed, to be mutated, but the treatment of which remains uncertain; the question "to mutate" or "not to mutate" the initial consonant of an English word, even when it is in exceptional cases submitted to reason, often remains unanswered. Few Welshmen say: "*Af i Bortsmouth*" ("I shall go to Portsmouth"); they generally prefer: "*Af i Portsmouth*," the *p* not being mutated. Nevertheless, millions of Welsh children have, throughout the centuries, learnt, without instruction, indeed in entire ignorance by all around them of the existence of mutations (as likewise of grammar), to speak Welsh fluently, and in general accordance with the demands of the dialect of the home district. There are, as already said, occasional deviations from the usual forms, just as there are some striking differences between the dialects; for instance, some sentences given in Professor Fynes Clinton's valuable book, "*The Welsh Vocabulary of the Bangor District*," contain mutations and omissions of mutation which are to me, accustomed to the "Gwentian" dialect of East Glamorgan and West Monmouthshire, positively startling. Not only do children never speak Welsh in which mutations take place in a fully consistent way, but the educated Welshman (occasionally even when he has studied the subject) is also apt to nod, and sometimes to snore. But the number of mistakes made by child and adult bears a very low ratio to the number of mutations correctly carried out.

(*To be continued.*)

Book Reviews.

Education at the Crossroads : by Lord Eustace Percy, M.P. (Evans Bros. Pp. 104+iv. 5s. net.)

Here is a book, and a most welcome one, by an ex-Minister, dealing with the work of the department he has just ceased to administer, and may be called upon to administer once more (though, perhaps, Lord Eustace says to himself, "Never again !"). The author admits that there is an unwritten law against such books, but pleads that he is breaking only the letter and not the spirit of the law ; for while he discusses educational questions of fundamental importance, they are not questions on which the administrative work of the Board has direct influence. I am not sure of this : for example Lord Eustace proclaims against the "ear-marking" of young men and women as teachers at the time of their entering the universities : yet this is an evil (if it be an evil) which the Board of Education could abolish at once by a change in its system of grants—a change which some of the universities have already proposed to the Board.

However, it would always be possible (and, I fear, inevitable) for a Minister who had committed himself to important principles, to find "unexpected administrative difficulties" in putting them into practice. And I for one am wholeheartedly glad that Lord Eustace has dared to express his views on paper, and that he gives evidence that he bothers his head about really fundamental problems of education. For the book is a stimulating and far-sighted one. It is remarkable for clarity, and also for courage ; it criticizes chiefly those bodies, the universities, best able to retaliate upon a man of university standing and with strong sympathies of his own towards the universities.

The book is, I believe, profoundly right in maintaining as its main thesis that essential reforms and developments of secondary and higher education depend upon action and self-reform by the universities. In this respect, I fancy, it is unique as a book, though teachers in the secondary schools have called attention to the harmful influences, in certain directions, of the universities on secondary school examinations ; and the reforms Lord Eustace wants most have been preached in season and out of season by some at least of those professors of education, as to whom he seems to feel some jealousy of their influence on the university education of teachers, a point on which he seems to be misinformed.

The secondary school curriculum is largely dominated by the school certificate examination. This, again, being used for matriculation purposes, is dominated by university regulations. The university naturally requires certain studies as preliminaries to more advanced studies. About 90 per cent., however, of secondary school pupils never go to a university. Hence there is an undue influence of the university matriculation regulations on the work of the mass of secondary school pupils ; more especially, Lord Eustace reasonably argues, is time wasted on getting a smattering of two or three foreign languages instead of a fairly thorough knowledge of one.

Lord Eustace protests against the inertia in university reform, and pleads for common action. "At all points of our educational system," he says, "it is university initiative that is most needed to-day." He seems to favour a scheme (already foreshadowed by proposals of the Association of University Teachers) for the dissociation of matriculation from the school certificate examination and its transference to the second examination at higher certificate stage. A further reform involved in his ideals for modern

language study is the abandonment by the universities of Latin as a compulsory subject for matriculation for the Faculty of Arts. As it is, thousands of pupils who will never get anywhere in Latin are vainly struggling with two foreign languages while they could make good progress by concentrating on one.

Many university teachers will agree with the author's criticism of the excessive drift, in modern universities, to specialized courses for the sake of being labelled an "honours graduate." There is a way out of the difficulty which he does not suggest but which seems to me the most practicable one, namely, that a wider "general" degree course should be planned (leading to an honours or pass degree, according to performance), extending like the present honours courses over four years from matriculation (or three years after higher certificate), but including a richer variety of subjects. The third class honours (either on the specialized or general course) might well be abolished, but this is not essential to the scheme.

If we turn to another section of the book we find statesmanlike suggestions for a development of the municipal technical college, school of art, and school of commerce into one great local college, which should also be the centre for adult education and which should provide a home for some social life of students in all these sections. It is a scheme well worth pondering.

My criticisms of the book would be largely concerned with points where the author touches on psychological matters, and here the non-expert psychologist usually fails—however distinguished he may be as an educational administrator or as a scholar in other departments of thought. For example, it is highly questionable whether, "if a man be taught to think well about any branch of technology, he will generally think well about other things also." Indeed, common observation is surely enough to rebut the statement. Nor can we hope that a general education will train a man to "*think originally*."

On various facts about university actions Lord Eustace also seems to have generalized too freely. But I am reluctant to attempt much by way of criticism of the book, because I feel so strongly that its main contributions are valuable and stimulating.

It will, in my view, go a long way to re-establish the author's reputation in the eyes of many teachers who were disappointed at his yielding, as they thought to an unnecessary degree, to financial pressure when he was in control at the Board of Education.

The book, I may add, is written throughout in a remarkably clear and vigorous yet undogmatic style. It is undoubtedly one of the most important books on education of recent years.

C.W.V.

Tests of Mechanical Ability: Report No. 3. (National Institute of Industrial Psychology.)

Members of the staff of the National Institute of Industrial Psychology have collaborated in the experiments recorded in this report prepared by Mr. F. M. Earle and Mr. A. Macrae.

The experiments, based on the original work of Stenquist, and the method by which the final revised form was reached, are outlined. Important modifications of the Stenquist tests are made—e.g., the collection of mechanical objects to be "assembled" is somewhat altered on the ground that some of the American objects were found to be unsuitable, the mechanisms not being familiar to the subjects tested (page 7). The tests can be applied to groups, but, after trial of both methods, individual testing was preferred, because of the information which can be gained by observation of the subject at work and his methods of attacking the problem (page 23). Temperamental factors, no doubt, enter here.

The ten objects to be "assembled" are of progressive difficulty, ranging from cupboard catch, gas tap, and bicycle bell, to bicycle hub and door lock and a scheme of scoring for partial success was devised. Naturally the subjects were mostly boys, but a limited number of experiments were made with girls. Preliminary experiments were done with elementary school boys and girls, junior technical school boys, and secondary school boys. The junior technical school boys are a selected group, and, as was expected, their scores were high. Secondary school boys did better than elementary school boys, and the older group of secondary boys did better than the younger group. The girls did worst of all.

Success in the test seems to depend on (a) the ability to perceive relations of shape or form, and, to a less extent, (b) general intelligence and (c) manual dexterity. To these one might, perhaps, add the factor of experience, practice or familiarity with similar or allied activities. In several parts of the report it is hinted that this kind of factor probably influences results (e.g., page 26, possession of a bicycle).

There is no information available which would make it possible to adjust for differences in experience—e.g., outdoor interests and pursuits (page 28), and the report suggests that instead of establishing norms for groups of different experience it would seem desirable to develop special tests for such groups (page 41).

If the Institute decides to develop special tests for groups because of differing experience it is to be hoped that it will give some attention to the needs of the girls who at present, as a group, take no mean part in tasks requiring mechanical ability. Their relatively poor average performance in mechanical tests may be due to innate incapacity. On the other hand, it may not. Professor Burt from wide experience has elsewhere with his customary acuteness suggested the possibility that the different environment and life history of girls and boys may help to produce boys ready with hand and eye, and girls ready with tongue and pen. In so far as the undoubted existing differences prove to be acquired rather than innate they will tend to diminish as experience approximates. This question is important if vocational guidance and selection aims at fitting men and women, as far as possible, into jobs which give most chance of success and happiness.

As the test stands the investigators consider it most suitable for use with boys up to 15 or 16 years of age whose training has not yet been specialized. It has high predictive qualities for an occupation where the factors necessary for success are balanced to approximately the same extent as they are in the test. The connection between success in this test and proficiency in certain trades, such as fitter, electrician, and smith, are given.

Altogether, the record of experiments leading to the revised tests, the detailed account of the test, the figures, tables, and suggestions for further research, are of great interest both from the general psychological point of view and from the point of view of vocational testing. F.M.A.

The Child's Conception of the World : by Jean Piaget. (Kegan Paul, Trench, Trubner and Co., Ltd. Pp. 397. 12s. 6d.)

In this book Piaget continues his valuable detailed study of child thought begun in his two earlier volumes, turning now more definitely to content rather than to form. In particular he studies here : (1) the realistic attitude of the child towards thought itself (including language expressing thought) ; (2) the animism, and (3) the "artificialism" in the child's interpretation of things. The material gathered for study is obtained through an elaborate system of questioning after a preliminary idea had been formed as to suitable questions from the observation of the child's spontaneous questions. Five types of

answers are distinguished : (1) at random ; (2) romancing ; (3) suggested conviction ; (4) liberated conviction (better, I should say, called reasoned judgment) ; and (5) spontaneous conviction (i.e., statement based on previous conviction.)

The important and difficult task is, of course, to separate out the genuine independent thought of the child. Piaget formulates several criteria of such originality, all useful but none of them I think infallible, as indicated below. But Piaget is, throughout his enquiry, careful to supplement any test by others, and to take the evidence of all together.

The tests of originality of the child's thought are as follows :

- (1) Uniformity for a given age. (This hardly allows for individual variations ; also when adult concepts are uniform their dominance on child thought would also tend to uniformity.)
- (2) Continuous evolution.
- (3) Absence of sudden disappearance of a type of thought. (But may not a child equally cling to an idea imposed by the authority of adults ?)
- (4) Resistance to suggestion.
- (5) Reaction of original ideas on other ideas.

As to the child's early conception of thought, this would delight the heart of a true behaviourist, for youngsters of five and six say "we think with the mouth," or that "thought is our voice," or "air." (One recalls the symposium at Cambridge led by J. B. Watson on "Is thinking merely the action of Language Mechanism ?")

Nominal realism also reveals itself in the little child in that the thing and its name are intimately bound together. Indeed, Piaget thinks that before the age of about 10, children actually confuse words and things. I cannot find his evidence convincing. What seems to me to be true is rather that the little child of, say, seven or eight, cannot prevent his thought from running on to the thing ; it cannot confine itself to the symbol. When then Piaget sums up this section of his work by saying that "thought is regarded by the child as inseparable from its object," it should, I think, rather be said that "in the little child thinking the words is inseparable from thinking of the corresponding objects." There seems to me to be a fallacy similar to that which Dr. D. H. McGregor once argued was made by some idealists in metaphysics, in that they said "we cannot think of the universe as existing without thought," while all they proved, he said, was that "we cannot, without thought, think of the world as existing."

After dealing with names and things, Piaget proceeds to study the child's idea of dreams. Here again definite stages are noted.

First (ages 5—6) the child believes the dream to come from the outside, and to take place within the room. Second (7—8) the source of the dream is said to be in the head or in the voice, and in the third stage (about 9—10) it is recognized to be "the product of thought." At the earliest stage the dream is held to be true. Sometimes even the persons dreamt of are thought of as causing the dream.

Piaget substantiates this classification of stages, though in this section of the book, also, I think, he at times puts an interpretation on the children's replies which we cannot regard as certain. There does seem to be, however, a very fair parallel between the child's conception of names and of thought, and its ideas about dreams.

In the treatment of the child's ideas of "magic" Piaget makes much use of the recollections of Edmund Gosse, and of some of his own collaborators. This section is interesting because it reveals a clearer and, I think, sounder conception of that egocentricity which Piaget in his earlier volumes showed to be characteristic of the child's thought. He here indicates that the child's

interest in self is not of such a nature as to imply a clear consciousness of self and not-self. "Narcissism, that is to say absolute egocentricity, certainly gives rise to magical conviction, but only in so far as it implies *absence of consciousness of self*" (p. 152. *Italics mine.*).

I suggest that this way of expressing the mental attitude of children might be used in explaining other thoughts expressed by them. It is not so much an explicit identification of thought and things or of self and non-self, or of things and their causal consequences, but rather an absence of a clear distinction between them that makes the child say things which suggest such identification. For, as Piaget himself has pointed out, the little child will often endeavour to say something, even if it be nonsense and quite irrelevant, if you press him for an answer.

The variability, and even irresponsibility, of the individual child in his expressions of thought is, however, recognized by Piaget, who states (p. 189) that he does not claim that an individual child can be "placed" in his right stage of development as regards development of animistic thought, by a given answer to a given question, for a different answer may be given the next day. Piaget does claim, however, and rightly, that his statistical work is valid because in the long run inexplicable variations cancel one another out, and the characteristic of each stage slowly reveals itself gaining predominance.

I have not space to deal with Piaget's interesting discussion of the child's ideas on the nature of "Life," or the section of the book on "artificialism" in the child's interpretation of the world: but the principles which Piaget claims rule in the development of the child's thought evince themselves also here.

If I have dwelt upon criticisms of interpretations in this book, it is only because the great value of Piaget's contributions to the study of child psychology are already widely known.

C.W.V.

The Psychology of the Adolescent : by Leta S. Hollingsworth, Professor of Education, Teachers' College, Columbia University. (Published by Partridge, London. Pp. 256. 6s.)

This survey of the persistent, universal problems of adolescence is distinguished for its clarity, its breadth of outlook, its insight into the problems discussed, and for the practical suggestions which spring from the application of basic principles to the various problems that may arise during adolescence.

The author has given an authoritative account of the major problems of adolescence based not merely on a thorough knowledge of the literature on the subject, but on sympathetic analysis of the practical problems of adolescents.

In the first chapter, after a short account of the physical signs of adolescence, the author discusses anxieties due to physical growth and to increase in size; she stresses wisely the gradualness of development and critically accounts for the myth of a magical change at puberty.

The second chapter contains a valuable account of primitive public ceremonies and of their modern counterparts, showing that throughout four major problems are involved: the necessity of getting away from the family, the confronting a vocational career, the fact that the adolescent has reached sexual maturity, and the recognition of the need which the maturing person feels for a point of view upon the universe.

These four topics are treated in the next four chapters under the headings: Psychological Weaning, Seeking Self-support, Mating, and Achieving a Point of View. In them the author gives a penetrating analysis of the problems which adults must face in their relations with adolescents and of those which the maturing persons themselves must face.

The final chapters discuss "Finding the Self" and "The Meaning of Maturity."

It is difficult to over-estimate the value of such a book as this to teachers and parents. Those who have forgotten the problems of their own youth will find them clearly formulated as they appear at present; those who are aware of their existence will welcome Professor Hollingsworth's treatment of them; and those who are unaware of their existence will be convinced of their existence. Her conclusions are supported by critical analysis of the evidence, and are stated in a way which must afford valuable guidance to all who are concerned with children who have not yet reached adolescence as well as to those who are faced by the problem of helping adolescents to develop a successful life plan.

A.E.C.

Everyman's Psychology : by Sir John Adams. (University of London Press. Contents, Introduction, 418 pp., and Index. 10s. 6d. net.)

The author is far too experienced to put forward a book of this kind without an explanation given in the Introduction. This draws the sting from any criticism which might otherwise be applied to this production of a distinguished Emeritus Professor of Education. But even accepting the reasons for the tone of the book one may ask whether the average man, who is presumably the "Everyman" for whom it is intended, will be able to gather much real psychology from the midst of its figures, its illustrations, its subtle humour, and bristling indications of wide learning. On seeing the book for the first time he may well say, "At last we have something by a man who knows his job and his public and will be able to tell us what all this psychology is about." He will probably read the first quarter of "Everyman's Psychology," including Chapter III, only to find that Occam's razor might have been applied in many places, indeed an axe might clear the wood to give sight of the trees. Gestalt psychology may be quite sound, but the parts must be understood to enable one to get a true picture of the whole; one who knows his subject will read with pleasure and feel at the end that "Everyman's Psychology" is a good summary touching on nearly everything that matters in the study, but every man who is not already acquainted with psychological principles will probably find difficulty in separating grain from chaff. Nevertheless the book contains excellent hints, tips, advice (call them what you will) on behaviour, temperament, day-dreaming, etc., although the psychoanalyst will probably not employ Sir John as his publicity agent. The writer does not give us any original views of his own, but confines himself to expounding, with a slight American accent, the opinions of leading schools of thought. The reader found his own enjoyment increase as he reached the last third of the volume, not because it was the last third, but because in it the author seemed more himself, less given to poking fun and taking the "chill off."

A.P.B.

L'Ame de l'Adolescente : by Pierre Mendousse. (Librairie Félix Alcan, Paris. Pp. viii+328. Francs 35.)

In the preface the author explains that this volume follows *L'Ame de l'Adolescente*, of which the first edition appeared in 1910. The delay is due not only to the War, but also to the greater difficulty found in the study of girls, and to the delicacy necessary in dealing both with girls and with their families. Girls, he says, try to appear what they would like to be and not what they are. Also, and this appears to be a more real difficulty, adolescence is made up of fugitive states of which the adolescents themselves have often at most only a vague perception.

The material presented has been obtained from several sources: observation, letters, twenty-two diaries, questionnaires, and enquiries from persons

qualified to give information. The book is divided into three parts, of several chapters each, dealing with "l'âge de disgrace," "l'âge d'indécision," and "l'âge de grâce." The concluding chapter treats of the education of girls. The writer mentions Montaigne's affirmation that males and females are cast in one mould, that almost all the difference between them springs from tradition and custom, but maintains that there is perhaps not even one mental function which "exercises itself" similarly in girls and in boys. He believes, however, that the equality between them to which Plato calls is alone compatible with the rights of the individual in these post-revolution days. But one of the first effects of too liberal an education is to inspire in many young women a dislike of the limitations which maternity imposes on their activities, and marriage on their rights. This state of mind in a country with a low birth-rate is disquieting, and, therefore, if one continues to regard education as the development of critical mind, it is urgent, says the writer, that such an education should be supplemented by special curricula and methods for girls which would show as historic and moral the normal rôle of woman in the life of the community.

After reading these views, which irresistibly remind the present reviewer of Rousseau's ideas for the education of women, it is interesting to note what is actually happening in France. The report of 1929* shows that the programmes of boys' and girls' instruction are becoming more and more identical; the examinations for men and women are approaching the same standards, and in the higher schools, the Faculty of Medicine and the Faculty of Law in Paris, the young women have the same privileges as the men.

F.M.A.

The Foundations of Experimental Psychology: edited by Carl Murchison. (Clark University Press and Humphrey Milford, Oxford University Press. Pp. 907. 27s. net.)

This book is quite *sui generis*. It is a series of long articles (twenty-two in number) dealing with all problems (it is claimed) which promise a reward to experimental investigation. About one-half of the book deals with topics closely connected with physiological enquiries. Other chapters deal with Infancy (by Gesell), General Ability (by Pintner), Special Abilities (by Freeman), with two chapters on the application of statistics to psychological problems. The chapters are much more than mere digests of the results of experiments, though they do serve the purpose of guiding the would-be researcher or the advanced student to many important papers on the topic selected.

Naturally, even in so large a book, some important contributions are overlooked, and we hardly think that all topics capable of experimental treatment are included here. Nevertheless, Dr. Murchison has accomplished a great task in gathering together so comprehensive a treatise on experimental psychology.

Educational Problems for Psychological Study: by G. Watson and R. B. Spence. (Published by The Macmillan Co. Pp. 352. 7s. 6d.)

This book presents a large number of problems arranged according to the main psychological principles involved in their solution. Most of the problems are presented adequately, but a few seem to be outlined too sketchily for adequate analysis. It is a book which helps to serve the valuable purpose of convincing students that educational psychology is practical; its value would be increased if more guidance were given as to the relative importance of the many books listed at the end of each chapter.

* See Roman: "The New Education in Europe." Second Edition, page 195.

The History of Psychology : by W. B. Pillsbury, Ph.D. (George Allen and Unwin, Ltd. Pp. 326. 15s.)

A book which attempts to cover, in three hundred odd pages, the history of psychology from early Greek writers to those of the Gestalt and Behaviourist schools, may easily be accused of skimpy treatment in parts at least ; and it does make one wonder to see, for example, Ward dealt with in a page and a half, and Stout in less. Nevertheless, we believe that there is a real place for a book of this type, not as a " popular history of psychology," as the publishers call it on the cover, but as a guide for those who are already familiar with some works on general psychology, to the various contributions made by particular schools, especially modern schools of psychological thought. Dr. Pillsbury is extremely clear and balanced. We doubt if there is, for example, so admirable an exposition of the Gestalt Theory in so few pages.

Educational Psychology : An Introductory Text : by Rudolph Pintner. (Published by H. Holt and Co. Pp. 378. \$2.50.)

The author, believing that the general field of educational measurement should be an integral part of a first course in educational psychology, has presented the main topics of the subject in a way which shows the bearing of experiments and measurements on the discovery of original nature and on the methods and results of modifying it.

The book is the outcome of careful thinking, and is written in a way which should lead students to assimilate the material easily. Concise summaries, short reading lists, and review questions should stimulate readers to think clearly.

It is a good introduction to modern educational psychology.

Before the Bluestockings : by Ada Wallas. (Allen and Unwin. Pp. 223. 8s. 6d. net.)

" When I read of the higher education of women as a modern invention," writes Oscar Browning in his " Memories of Sixty Years," " I think of my mother, born a hundred and ten years ago, and wonder whether any modern woman is as well educated as she was." The same wonder is aroused when one reads Mrs. Graham Wallas's account of that distinguished Anglo-Saxon scholar Elizabeth Elstob (1683-1756). It is a strangely moving story of a passion for learning which ran successfully for some years, to be followed by grinding poverty, ill-health, and final alleviation by a situation as governess in a ducal household. Had not her brother died, Mrs. Elstob would certainly have advanced the study of Old English to a point that it did not reach for many years ; but such pursuits were little regarded in her day, and the idea of a learned female was distasteful. But there was one happy feature in her life—the disinterested friendship of George Ballard, author of " Memoirs of Learned Ladies." Three other women figure in this book, Hannah Woolley, Damaris Masham, and Mary Astell. Mrs. Woolley was a seventeenth-century writer of books on cookery, physic, manners, dress, and other topics of importance to gentlewomen. One of her counsels is worth quoting, as being courageous for her time : " Whatever you do, be not induced to marry one you have either abhorrency or loathing to." Lady Masham had a famous father, Ralph Cudworth, and a more famous friend, John Locke. In her husband's house, Oates, Locke lived from 1691 till his death in 1704 ; and it adds interest to one's reading of his " Thoughts concerning Education " to know under what circumstances it was written, and to make the acquaintance of Lady Masham, who was almost a collaborator in this work. Mrs. Astell is best known for her " Serious Proposal to the Ladies for the Advancement of their True and Greatest Interest " (1697), " the first considered attempt

to interest Englishwomen in the higher education of their sex." She proposed to found a seminary for ladies, who were all to be of quality and of the Church of England (in a pamphlet she advocates the "Total Destruction of Dissenters"); but the plan was withdrawn—Bishop Burnet thought it sounded too much like a nunnery; and so, as Mrs. Wallas remarks, the women of England had to wait more than a century and a half for Bedford College. There are two studies also of men writers—Lord Halifax, whose "Advice to a Daughter" (1688) is an interesting document: the "daughter" married the third Earl of Chesterfield and became the mother of the famous Earl; and secondly, Sir Richard Steele, whose *Tatler* was designed for women as a part of the reading public. With all his faults Dick Steele devoted himself to the "reasonable service of women"; and, besides the gentle satire with which he ridiculed their failings, he did them the justice of treating them seriously. He saw clearly, far in advance of his day, the "unaccountable wild method in the education of the better half of the world, the women." Mrs. Wallas has done a useful work in writing this book. The characters she portrays stand out clearly: one can remember them better than after reading a large book (like Mrs. Gardiner's excellent "English Girlhood at School"). It should form part of the reading at any rate of all women students of education; but women in general would learn from it how much they have to be thankful for nowadays.

F.A.C.

The Teaching of English: by Herbert E. Palmer. (Murray. Pp. 136. 3s.)

"In brief, the aim of this little work" (says its author) "is to present in very short and concentrated compass a series of illustrative suggestions, of practical possibility and certainty, to aid the teaching of English in schools of all kinds (though more particularly in "public" and other secondary schools). The basis of all such teaching should be literature rather than grammar. It is important that people should write and speak correctly, but it is even more important that before doing so they should think reasonably." These remarks strike the key-note of a thoroughly sensible work which may be confidently recommended to the young teacher. It contains nothing startlingly new, which is all the better for the beginner—since he is too apt to run blindly after every latest stunt. Thus though Mr. Palmer is himself a poet, he deals very cautiously with verse writing: "this is a very enjoyable and beneficial exercise, but can easily develop into a craze and be overdone. Rarely will the teacher discover a poet, and there is no need for him to make too much fuss about it when the exercise-book does put on wings." For most teachers this is safer counsel than that of the transatlantic "creativists," valuable as their guidance may be to the few who can follow it. Mr. Palmer was urged to write this book by the Poet Laureate: and Sir Arthur Quiller-Couch contributes an introductory note.

F.A.C.

Preparation for Teaching: by M. O'Leary, M.A. (Univ. of London Press. Pp. 191. 8s. 6d. net.)

An exceedingly useful compilation of notes of lessons by experienced teachers, whose notes are put forward as models indicating the principal points a student should have in mind in preparing lessons. It is likely to be of particular value to beginners whose maturity of mind and perhaps experience also, are not sufficient to enable them to deal with the abstractions of modern method books. The author points out that the danger of slavish copying of these models will exist and must be faced, but even so they will undoubtedly prove very useful, for they indicate the broad principles on which lessons stand and by their concrete expression here they will facilitate the understanding of much of the theory which has so often seemed of little use in modern training. The book

now before us brings practice into close and early relationship with theory ; the " notes for students " attached to each lesson are of great value in this connection. The editor's introduction is obviously the work of an enlightened teacher who has no toleration for cast iron methods, and equally none for waste of time in the class room ; she expects each lesson to serve a definite purpose and with the able assistance of her colleagues she shows how it is to be done.

A.P.B.

A First Book on Teaching : by N. Catty. (Methuen. Pp. xvi + 189. 5s.) There are many books which aim at helping the student in training over the difficulties of first efforts. This is one of the best that the present reviewer has read. Even experienced teachers should find it refreshing and helpful. It is essentially practical, but while it succeeds in giving much practical help, at the same time it indicates reasons and theory underlying good practice in specific situations.

It should prove an excellent guide for students to work through, both privately and in discussion groups. No doubt it is the result of much experience of the needs of students.

One good feature is that it gives a student some idea of education as a process, from nursery school to secondary school. In one or two places one could wish for a little more detail, e.g., in the comparison of the Howard and Dalton Plans (p. 83), or, failing this, references for further reading might have been given. Indeed, a bibliography would have added to the value of the book.

Numerous interesting questions are given for study and discussion.

F.M.A.

Hike and Trek : by G. F. Morton. (Pp. 159. Harrap. 3s. 6d.)

This very interesting little book by the head master of Leeds Modern School has as sub-title " Education in the School of Adventure." It is a record (with names of individuals wisely disguised) of many adventurous journeys in all parts of Great Britain, of mountaineering in Switzerland, Italy, and the Pyrenees, and of voyages in the track of R.L.S. in Belgium and the Cevennes. Though its main appeal will be to scouts and scoutmasters, it will be read with profit by all who have to do with boys. Dr. Morton not only makes one feel his spirit of adventure, but he gives much practical advice concerning such essentials as kit, carts, food, camp kitchens, and boats ; so that anyone thinking of taking parties of boys abroad should find this book of real service. It contains twelve excellent pictures. Sir Alan Cobham writes a foreword, and Lord Baden-Powell an epilogue.

F.A.C.

The Life of a Modern University : edited by Hugh Martin. (Student Christian Movement Press. Pp. 84. 2s.)

This is a collection of essays gathered together by Mr. Hugh Martin. As each writer is allotted only a very short space, it is easily understood that none of the aspects can be treated with very great thoroughness. The essays, however, so far as they can cover the ground in so short a space, are most suggestive, and certainly most readable. Not only students, but teachers in the university and in the schools, may learn much from them. The Vice-Chancellors of the Universities of Liverpool and Birmingham deal respectively with the history and significance of modern universities and with religion in modern universities. Professor Findlay deals with aims, and Professor Grant with academic life. Mr. E. Barker, Secretary of the Student Christian Movement in Leeds, discusses social life, while a chapter on " Students from Overseas " is provided by Miss Margaret Read, formerly International Relation Secretary of the Student Christian Movement.

The British Universities : by Sir C. Grant Robertson. (Benn's Sixpenny Library. Pp. 80.)

This is without exaggeration a "wonderful sixpennyworth." In a comprehensive sweep it traverses the history of our universities from their beginnings to the present day, and looks beyond the present to things to come.

The most notable character of the book is the way in which the author, while treating his subject historically, is vividly conscious all the time of the bearing of each step in the history of the universities on the present and future. The book gives the lie direct to those who assert that to write good history you must detach your mind from present day affairs. It is in itself an excellent demonstration lesson for teachers of how history can be made more vital by contact with existing problems.

As history, of course, it is bound to be cursory within such a small compass. One can only hope that some day Sir Charles will give us a thorough treatment of the history of our universities.

Notes for the Study of English Education : by H. Ward. (Bell. Pp. 64. 2s.)

Mr. Ward gathers into these few pages a very large amount of matter on the changes in English education between 1860 and 1902. The course is set out under heads with notes, which are kept well within limits and not allowed to expand in any way to disturb clear statement of the principal events in the important period treated. Suggestions for reading are to be found with each chapter, and they are, with few exceptions, quite within reach of most people who have any interest in the story. Mr. Ward had to begin and end his notes somewhere; 1860 and 1902 are as good for his purpose as other time marks, but no one is better qualified to carry the notes on through the very important legislative and administrative changes of the past thirty years, so we hope Mr. Ward has this extension of the present little brochure already in hand for early publication.

The Child's Heredity : by Paul Popenoe. (Bailliere, Tindall, and Cox. Pp. xiii + 316. 9s.)

This is a rather curious book. It is packed full of facts, gathered from a great range of papers and books on inheritance, and it uses the language of modern biology. Yet it is intended for parents. We should be glad if we could think many parents would give it serious study, but we doubt it. As a preliminary guide to many well known and many out of the way facts and researches on heredity it should, however, be useful to students of child psychology and all interested in problems of eugenics. We fancy the book is stronger on the biological side than the psychological; but then the reviewer is less of a biologist than of a psychologist.

Comenius and the Indians of New England : by R. F. Young. (School of Slavonic and East European Studies in the University of London, King's College. Pp. 27. 3s. net.)

It would be curious indeed if one who was in correspondence with Samuel Hartlib was unaware of what was projected for the education of Indians in territories in course of development overseas, or if an educator of European fame such as Comenius remained unlonged for in American Colonies where a shoot from Cambridge was showing vigorous growth. The study bearing the above title sets forth some views on the tradition that Comenius was offered the presidency of Harvard College, together with certain references made in his correspondence to propaganda work among the Indians and the use of some of his writings.

Children in the Nursery School : by Harriet Johnson. (George Allen and Unwin, Ltd. Pp. 325. 12s. 6d.)

This book will provide many useful suggestions for nursery school teachers and for parents in dealing with children about two or three years of age. It includes the records of many observations on the play of little children, with apparatus provided for them. The occasional psychological generalizations are apt to be vague and flimsy, but the practical acquaintance with the needs and interests of infants of this age, and the presence of a psychological attitude of enquiry and study, are very evident.

The Great Mathematicians : by H. W. Turnbull. (London, Methuen and Co. Pp. 128. 3s. 6d. net ; School Edition, 2s. 6d.)

The Professor of Mathematics in the University of St. Andrew's has written a very useful addition to "The Great Scientists" Series. By choosing eminent mathematicians of different periods, Professor Turnbull has attempted, with marked success, to show the development of mathematics both in the minds of some of its best exponents and also in the history of science. On the last page of the book the author writes, "If this little book perhaps may bring to some, whose acquaintance with mathematics is full of toil and drudgery, a knowledge of those great spirits who have found in it an inspiration and delight, the story has not been told in vain." It has not.

Children's Percussion Bands : by Louie E. de Rusette. (Kegan Paul. Pp. x+173. 3s. 6d.)

This book deals very adequately with the formation and management of Percussion Bands. The impression, however, given by the book, that a comprehensive and satisfactory musical training would be gained through this method alone, is open to doubt. The "listening" aspect of music, so essential equally as a mental attitude and a physical fact, finds little place in this scheme. One could recommend this method from the purely rhythmic side of musical education in the early stages, but one feels that it would have to be considerably supplemented in order that children may realize music as a whole rather than as so many component parts.

Incentives to Study : A Survey of Student Opinion : by A. B. Crawford. (Yale University Press. Pp. 194. 23s. net.)

This is a record of an extensive enquiry into the motives and other factors which influence the success of students in their university careers. The results show that such factors as economic status, definiteness of orientation, professional interest have a decided influence ; it is evident that the natures of the studies themselves are not adequate incentives to study. "Meaningless compulsions put upon the student, often in conflict with his real academic interests," are notably harmful. The report is a most valuable one.

Prognosis Tests in Modern Foreign Languages. Being Vol. 14 of the Publications of the American and Canadian Committees on Modern Languages. (Macmillan, 1929.)

This is another extensive report on an important aspect of modern language studies. In spite of the fact that the evidence offered confirms the general view of psychologists that a capacity to learn a foreign language depends on a considerable number of specific abilities, the report also gives encouraging facts showing that groups of specific tests which can be applied in an hour or two can give very reliable prophecies as to the ability of pupils to learn languages, the correlations being as high in some cases as 0.8.

The Child from Five to Ten : by Evelyn and Miriam Kenwrick. (London, Kegan Paul. Pp. 300+vi. 7s. 6d. net.)

This interesting book, published in response to many requests, contains the subject-matter of those attractively written articles on child study which appeared in "Good Housekeeping," from 1925-1927. Many teachers of infants and junior scholars, students in training, and parents will be glad of the opportunity of reading the book, for it expresses the results of careful and painstaking work done in the Preparatory and Junior Form Department of the Maria Grey Training College.

Aptitude Testing : by Clark L. Hull. (G. Harrap. Pp. 535. 8s. 6d. net.)

An encyclopædic volume summarizing the most important work done by investigators in all fields of testing during the last fifty years, with the methods of carrying on research and criticizing results. The work is comprehensive, and where formulæ are concerned the notations have been kept clear throughout. A useful book.

Social Problems of Childhood : by Paul Hanly Furfey. (Published by the Macmillan Co. Pp. 288. 10s. net.)

The author surveys briefly what has been done by various States (chiefly American) to help to solve many of the social problems of childhood. Lines of advance are suggested in order that the spiritual well-being of children may be promoted.

A Determination of Generalizations Basic to the Social Studies Curriculum : by Neal Billings. (Published by Warwick and York. Pp. 289. \$3.00.)

This University Research Monograph describes a method of discovering basic generalizations, and gives a classified list of 888 basic principles in social science with references.

Intermediate Inorganic Chemistry : by J. W. Mellor. (London : Longmans, Green, and Co. Pp. 690+xx. 7s. 6d. net.)

Dr. Mellor's series of text-books in inorganic chemistry is so well known that this revised edition is assured of a ready sale. This volume, a revision of an "Introduction to Modern Inorganic Chemistry," has been brought up to date and constitutes a useful intermediate text-book.

Myths of the Origin of Fire : by Sir James G. Frazer. (Macmillan and Co., Ltd. Pp. 218. 12s. 6d.)

This latest contribution by our greatest authority on the Mythology of primitive man deals with ideas as to the origin of fire from all parts of the world, and provides a fascinating study.

Manuel Lexique des Difficultés Linguistiques du Français : by G. H. Clarke, M.A., and A. Charpentier. (George Harrap and Co., Ltd. Pp. 315. 12s. 6d.)

This is not a complete dictionary, but a kind of dictionary, and a full one, confined to terms likely to be of special difficulty or ambiguity, explaining them usually in French, and illustrating them by sentences in French. It also serves as a dictionary of grammatical terms, which we wish were explained in English. The work is a valuable companion for students of French.

Plato and His Contemporaries : by G. C. Field. (Methuen and Co., Pp. 242. 12s. 6d.)

A scholarly and well written exposition of Plato's teaching as studied in the environment which helped to mould him. It is the work of one who is able to take the historical as well as the philosophical point of view.

Source Book of Constitutional History from 1660 : by D. Oswald Dykes, K.C., M.A., LL.B. (Longmans, Green and Co., Ltd. Pp. 505. 21s.)

A scholarly production, intended for the advanced student, and providing a valuable supplement to studies in English constitutional history.

NOTICES OF FOREIGN JOURNALS.

Zeitschrift für Pädagogische Psychologie. (November, 1929. VERLAG, QUELLE, und MEYER, Leipzig.). Price for single number Marks 1.20.

GEORGE LUNK : On Stages of Intelligence (Intelligenz stufen. Pp. 497-517). The author has tried to arrange different levels of intelligence, corresponding to essentially different meanings of the word "think," in three successive stages, in which the essentially different characters of the thinking may be defined and contrasted, though these stages are regarded as continuously shading off into each other

The first stage is that of a mind able to think again what someone else has previously thought, to understand, absorb, and even master such thoughts. In order to understand it may be necessary to compare with one's own experience, to express in one's own words. This first stage is called "reproductive" intelligence, because it reproduces the thoughts of others without going beyond them. In the lowest sub-stage is the mind that annexes, copies. A higher sub-stage disposes ideas in their places as fundamental or as structures based on a foundation, the highest sub-stage attains to mastery of the idea or theme. In all this there is no hint of going beyond the theme applied.

A mind in the second stage goes further if only dimly "feeling" that what is offered does not satisfy, that there are gaps or errors in the thesis. The mind is "critical," is on the look out for points of agreement or disagreement. The mind does not merely absorb knowledge but takes up a position towards it. Criticisms arise as side lights or additions, questionings of foundations or consequences; parallels and contradictions are seen. Critical intelligence is greater than and includes the merely reproductive mind. Criticism begins with detail, considers structure, and ends with an attitude to the theme as a whole.

Sub-stages may be distinguished within the critical stage. In first reading of new material we adapt what is meant to our own way of thinking. Then involuntarily we begin to ask how the author reaches his ideas, to what conclusions we should carry them forward. Often the nature of our internal standoffishness is better described as feeling rather than as thought. A sort of semi-conscious glimmering is in us that the truth lies elsewhere. This emotional criticism of the whole may from the subconscious intuitively hit the mark. A delicacy of feeling or tact may take an attitude in advance of intellectual grounds for it. It is sometimes useful to entice children on to thin ice so as to see at just what stage their intelligence will revolt. Where the capacity for critical thought exists it may be waked to action.

The lowest sub-stage within the critical stage is that which remains within the given line of thought, criticising detail, unhappy turns of expression, empty phrases, gaps in continuity. A second sub-stage would rise to criticism of the logical structure, a third sub-stage to criticism of the theme as a whole, considering not only postulates and consequences but also the views of other authors on the same subject. But through all these sub-

stages the critical intelligence still remains only critical—not constructive ; it still remains inside the charmed circle of a given circuit of ideas ; it is not yet critical enough to rise above its own criticisms.

There is a higher third stage, but it is rare and limited to intellectual natures who are not satisfied with a negative attitude and do not persist in aloofness. The mental ferment leads to new ideas transforming the content of the thesis into a new thought structure. New solutions are found on new foundations, new problems are posed. This stage may be called “creative,” because new thought combinations of one’s own are opened up. This is the region of the imaginative creative artist and of the metaphysical thinker. Those who experience the inspiration of new conceptions cannot always trace the steps which led to the sudden flash of illumination.

In the characteristics of creative thinking it is again possible to trace three sub-stages. The new thought may be sporadic in isolated interesting particulars. Or it may be new in the structure and order of thoughts. Or, thirdly, it may be that new problems, hypotheses, and points of view which may in after time release new forms of thought, wake mental revolutions or introduce new eras (as, for example, Galileo). Originality of the first sub-stage is exemplified by technical invention and applied science. Here the particular items are arranged in some new way, evoking a primitive eureka—experience. A higher second sub-stage leads not merely to new solutions but to new transforming ways of stating the problem viewed at a greater distance and with more range and depth. Ideas sometimes emerge in early morning hours from the inward vision, self-observation contributing nothing to explain the process. The spirit seems to work hidden until with a certain degree of tension and intensification the new idea bursts into consciousness. Each great new hypothesis is a venture into the unknown. Genius is not only diligence but it is a true word that describes the loneliness of noble souls and great spirits. The original creative opens a new vision, transforms the whole nature of the solution, gives us a new eyesight. The word “original” we may reserve for those who are the first to break into new ideas, even though their successors sometimes independently repeat their discoveries. Goethe and Newton provide examples of the highest type of thinking, but life presents and needs all forms of psychic life, the naïve, the critical, and the creative. Kant’s critique of the power of judgment needs to be carried forward in a criticism of the mind of man.

It would be tempting to inquire how far the different subjects of instruction correspond to the intellectual values or stages of mind already described. The outcome might be a clearer view of intellectual development.

(March, 1930.)

“Führertum in Kindergarten” (“Leadership in the Kindergarten”), by Hilde Adelberg, of Vienna, is a study of the social behaviour of twenty children—boys and girls—mostly between three and six years of age. Spontaneously developing group games were watched and recorded. Most of the children played in groups of two or three. There was one group of four or more, and one particular boy who was often found playing in a group of four or more. The same boy was not only found in the largest group, but in more different groups than any other child. Their game was often “Indianerhaus” (“playing at savages”), a traditional game of their own creation. This group attracted some children, tolerated some, rejected some. The success of the leader seemed to depend on an understanding of his group of play-fellows as a whole ; to him they were comprehensible, stimulating, and capable of direction. Another boy was relatively a failure because too engrossed in seeking his own personal satisfaction, too little attentive to the whole social situation. The girls were, on the whole, more passive but not without influence on the leaders.

Das Werdende Zeitalter. (December, 1929.)

ALBERT RUMPF, in *Die neue Fragestellung in der Jugendschriftenfrage*, follows up the inquiry into the books children read. One good source of evidence is in library record cards, both the book cards and the readers' cards. The material collected in recent years refers to some thousands of children. There is a pretty definite choice of books, different at different ages. For example, boys at age 12 choose "Robinson Crusoe." Up to age 10 or 11 "Märchen" (legends) are the favourite reading of boys and girls. Girls hold on to such story books a year longer than boys. At 12 the interests of boys and girls diverge, the boys follow adventure stories, the girls follow stories of house, home, school, and holidays. Boys of 12 to 14 also take to historical adventure books and stories of school, play, and sport. The boy stands proudly off from the girls' story books, the girl does not altogether reject the adventure books. After 14 the boy is not yet nibbling at adult literature, but the girl immediately after leaving school or even in the highest Volks-schul class is already leaning towards the modern social romance. The boys tend towards the objective and material, the girls towards a limitation of interest and towards the subjective.

This development may be stated as a continuous process both for boys and girls beginning in the imaginary world of the legend bound to fact neither in time nor space, passing through the adventure world, not impossible in other times or places, and ending in the real world true to adult life.

PUBLICATIONS ALSO RECEIVED.

ENGLISH.

- The Course of English Classicism :** by Sherard Vines. (The Hogarth, Press. Pp. 165. 3s. 6d.)
- Cato, or the Future of Censorship :** by W. Seagle. (Kegan Paul, Trench Trubner and Co. Pp. 96. 2s. 6d.)
- A Book of Narrative Verse :** compiled by V.H. Collins. (Oxford University Press. Pp. 466. Cloth, 2s. ; leather, 3s. 6d.)
- Philip's "New Prospect" Readers :** published by George Philip and Son Ltd. Price, 8d. each. **Cannibals and Coconuts :** by C. W. Collinson, pp. 72. **Alone in an African Swamp :** by J. G. Squiers ; pp. 64. **Desert Adventures :** by W. T. Blake ; pp. 64. **Climbing Mount Everest :** by G. I. Finch ; pp. 72. **The Training of Chiliqui :** by A. Sullivan ; pp. 72. **The Story of One-Ear :** by A. Sullivan ; pp. 68.
- Prose and Versing Speaking for Schools :** compiled by A. Drew and B. Robinson. (George Harrap and Co., Ltd. Vols. I to VI. Pp. 68 to 112. 8d. to 1s. net.)

HISTORY.

- History of Mankind :** by Hutton Webster. (D. C. Heath and Co., Boston. Pp. 685. 7s. 6d.)
- Europe in the Eighteenth Century :** by G. B. T. Nicholls. (George Harrap and Co., Ltd. Pp. 245. 3s. 6d.)

GEOGRAPHY.

- People and Homes in Many Lands :** by F. G. Moss. ("The Peoples of the World, Vol. II.) (George Harrap and Co., Ltd. Pp. 219. 2s. 6d.)
- The Columbus Regional Geography :** by L. Brooks and R. Finch. (Senior Series, Book II: North America and Asia.) (University of London Press, Ltd. Pp. 256. 2s. 9d.)

SCIENCE.

- A Simple Course of Experimental Chemistry :** by F. Luke and R. J. Saunders. (Sidgwick and Jackson, Ltd. Pp. 154. 2s.)
- The Beginnings of Chemistry :** by Harriett Beale. (George Allen and Unwin, Ltd. Pp. 243. 4s. 6d.)
- Elementary Inorganic Chemistry :** by J. W. Mellor. (Longmans, Green and Co. Pp. 229. 3s. 6d.)
- A System of Chemical Arithmetic.** (Harrap and Co. Pp. 40. 1s.)

BOOK REVIEWS

MATHEMATICS.

- A School Geometry:** by A. Walker and G. McNicol. (Longmans, Green and Co. Pp. 492. Part I, 3s. 6d.; Part II, 3s. 6d. Also published in smaller parts at 2s. each.)
- A Primer of Geometry :** by W. Parkinson and A. J. Pressland. (Oxford : Clarendon Press. Pp. 304. 4s. 6d.)
- Cambridge Intermediate Mathematics Geometry :** by J. Larcombe. (Part II.) (Cambridge University Press. Pp. 237. 2s. 6d. (With answers : Pp 253. 2s. 9d.)

CLASSICS.

- Readings from Tacitus :** by Alexander Duthie. (Harrap and Co. Pp. 86. 1s. 6d.)
- Readings from Ovid : Metamorphosis :** by Alexander Duthie. (Harrap and Co. Pp. 103. 1s. 6d.)

MODERN LANGUAGES.

- Selected Poems of Victor Hugo :** by A. T. Baker. (Methuen and Co. Pp. 342. 4s.)
- La Noche de Navidad and Callar en Vida y Perdonar en Muerte :** by Fernan Caballero. Edited by R. M. Macandrew. (Longmans, Green and Co. Pp. 108. 2s.)
- Recuerdos de Ninez y de Mocedad :** by Miguel d Unamuns. Edited by W. Atkinson. (Longmans, Green and Co. Pp. 88. 2s.)
- A Practical Grammar of the German Language :** by F. L. Sack and F. L. Thompson. (Longmans, Green and Co. Pp. 92. 2s.)
- L'Épopée de Roland et de Charlemagne :** by W. G. Hartog. (Longmans, Green and Co. Pp. 96. 2s.)
- Historical Introduction to French Phonetics :** by A. Lloyd James. (University of London Press. Pp. 171. 7s. 6d.)

MISCELLANEOUS.

- An Outline of Musical History.** Vol. I : **From the Earliest Times to Handel and Bach :** by T. J. Hewitt. Vol. II : **From C. P. E. Bach to Modern Music :** by R. Hill. (The Hogarth Press. Vol. I, pp. 98. Vol. II, pp. 146. 2s. 6d. each.)
- The Reign of Law :** by K. E. Innes. (The Hogarth Press. Pp. 42. 1s. 6d.)
- Landmarks of English History :** by H. A. V. Ransom. **Week-day Christianity :** by Rev. P. B. Clayton and Rev. L. G. Appleton. (Routledge : " Introductions to Modern Knowledge." Pp. 75 and 76. 6d. each.)
- British Diarists :** by Lord Ponsonby. **Speech :** by J. R. Firth. (Benn's Sixpenny Library, Nos. 70 and 121. Pp. 80 and 79.)

The Forum of Education.

VOL. VIII. No. 3

November, 1930.

The Future of "The Forum of Education."

AN important development in the history of this journal has just taken place. The British Psychological Society have approached the Training College Association with a proposal for a journal entirely devoted to Educational Psychology, and it has been decided that THE FORUM shall undergo a metamorphosis and that a journal incorporating it shall appear under the title *The British Journal of Educational Psychology*.

This journal will be a sister journal to the well-known *British Journal of Psychology* and the *British Journal of Medical Psychology*, both issued by the British Psychological Society. It will appear in a larger and more substantial form, similar to those journals.

The journal will be devoted to Educational Psychology, but that term will be broadly interpreted, as nearly all problems of education have a psychological aspect ; so that papers dealing with researches on almost every aspect of education may be included, and, in particular, papers dealing with Method from a psychological point of view.

Reviews of all important books on Psychology which have any bearing on Education will continue to be a prominent item of the journal in its new form.

The journal will be under the joint control of the Training College Association and the British Psychological Society. It has been found that this joint control can be arranged for most conveniently by the founding, by these two societies, of a limited liability company, of which the members will be representatives of the two societies.

The present Editor of THE FORUM has been asked by both societies to continue to act as Editor of the journal. He will be supported by an Editorial Board which, it is hoped, will include not only the distinguished psychologists among the members of the Editorial Board of THE FORUM, but also a number of authorities on Educational Psychology in the United States of America and on the Continent.

One number of the journal will be issued (as was THE FORUM) each term: in February, June, and November. The annual subscription will be £1, or seven shillings and sixpence per number. Members of either society receive the journal at a reduced rate.

The journal will be published by Messrs. Longmans. Subscriptions (£1 per annum post free) may also be sent to the Managing Editor, The University, Edmund Street, Birmingham.

The Subconsciousness and the Acquirement of a Second Language.

The Conditions of most Effective Work.

BY WILLIAM PHILLIPS.

PART II.

THE difficulty of the task which lies before the teacher who tries to teach Welsh without the aid of English to English-speaking children of seven or even ten years of age is obviously greater than that involved in teaching him any other subject. The question, therefore, which I now wish to ask is this : Does the recommendation made by me apply to the teaching of Welsh on the Direct Method to English-speaking children? *Ought the teacher to so organize and classify from the point of view of mutation, (in addition to others which must be kept in mind), the sentences (questions, answers, commands, etc.), he presents to his pupils, so as to further and accelerate that systematization of them which must take place in their minds, if they are to gain a mastery over them?* The mother has some regard to her child's capacity in choosing the words and phrases she addresses to him, but otherwise makes no arrangement of them ; she certainly adopts no system in selecting them. Is a teacher to follow the same method (or rather absence of method) in teaching Welsh to English-speaking children? It is obvious that he must at first and for a year or two give preference to such simple commands, questions, and answers as are important because they are common : furthermore he will, in regard to words to be included in them, give preference to those which can be taught in connection with actions, and the exhibition of objects, pictures, etc., that is, in more general terms, in connection with simple situations out of which the individual sentence arises in everyday life.

B. (2) (a).—AN EXAMPLE SHOWING THE WAY IN WHICH A WELSH-SPEAKING CHILD MASTERS A PARTICULAR MUTATION, AND A PRELIMINARY ANALYSIS OF THE PROCESSES INVOLVED.

Let me try to find a possible answer to my question by considering the case of a child of seven who can speak Welsh (and only Welsh) with the same fluency which an average English child of that age shows in speaking English. Suppose that on his first visit to a Boy Scouts' Camp he hears and learns the meaning of the (to him) new word, *pabell* (tent). Suppose, too, that he uses it a

few times in this unmutated form, and that he does not hear anyone speaking it in any other form. If he is soon afterwards asked what he had seen, and desires to answer, " I saw (a) tent," will he correctly say, " Gwelais babell," or wrongly, " Gwelais pabell? " On the one hand, we know that he has during his life employed thousands of sentences in which, as here, a transitive verb comes first, and the noun (or noun plus adjective, or verbal-noun) forming its object follows immediately after it, and has its initial consonant, if mutable, changed. On the other hand, we know that when cert. in words occur between the transitive verb and such a noun, the latter's initial consonant will not be mutated, although the noun is, in a sense, a part of the object: for instance, in the sentence, " Gwelais dri chi " (" I saw three dog "), *t* in " tri " (masculine adjective=" three "), is mutated, because it is the object of a transitive verb, or it would perhaps be better to say that it is the first word in the group of words forming the object; *c* in " ci " does not take the soft mutation *g*, for on account of the original ending, now lost, of *tri*, it became *ch* and remains *ch*.

It is obvious that the child's mind is beset by counter-currents of all kinds and intensities. It is, I think, equally clear that what he deals with is a phrase or a sentence (and not individual words) in which the mutation or non-mutation of a particular word's initial consonant depends on its relation to a previous word or phrase, and that that relation is only sometimes of a general functional character. As already said, such a relation exists between a transitive verb and its object. Whatever the tense, person, number, or mood of the transitive verb employed, *gi*, if a dog is referred to, will be the form which the grammatical object following immediately after the verb will take, and not *ci*; *babell* and not *pabell*, etc.

On the other hand, mutations may take place where no such *general* functional influence exists: e.g., in some nouns preceded by the definite article *y*. The question whether mutation is or is not to take place here does not depend on the *function* of *y*: where a change occurs, the form it takes is like a fossil; it reminds us of phonological disturbances long, save for a few exceptions, quiescent. To-day we invariably say *y-carn* (the hoof): this *y* in very early Welsh was *yr*, which had, as already indicated, either a masculine inflection ending in a consonant (maybe *s*) or a neuter inflection ending in a different consonant (maybe *m*). Hence, no intervocalic mutation of *c* was here possible. The neuter inflection disappeared, and neuter nouns became masculine or feminine, and so it has come about that the only reason that can now be given

why *c* in *carn* does not change after *y* is that *carn* is masculine gender, and *carn* is masculine because (for one thing) the same personal pronoun is used instead of it as for the name of any male. If *cadair* ("chair") were the word defined by *y* we should say *y-gadair*, and the only reason we could assign for using this combination would be that *cadair* is feminine, the same personal pronoun being used in referring to it as to the name of a female.

But whatever slightly favourable tendency is created by the conditions just noted, the effect upon it of a counter-force must be remembered. The difficulty of mastering the possible permutations of *y* plus noun-having-an-initial-mutable-consonant is increased by the incomplete nature of the process, for two (namely, *ll* and *rh*) of the nine mutables do not, at least in the classical forms of the language, change after *y*.

Will it help us if we find that the answer to the question whether the Welsh child will say "Gwelais babell" or "Gwelais pabell" depends on the possibility of placing this sentence either in a class of cases where the mutated word is subjected to a *general* functional influence, or in a class in which the change is due to a *particular* cause?

B. (2) (b).—A FURTHER DISCUSSION OF THE GENERAL FUNCTIONAL AND THE SPECIAL INFLUENCE EXERCISED BY CERTAIN WORDS.—COUNTER-FORCES.

The Welsh grammarian has, in dealing with mutation, grappled with the possibility of dealing with it systematically; he has shown that the "soft" type concerns all the nine mutable consonants, the "nasal" six, and the "aspirate" (or "spirant") three. The teacher might attack his special task by asking whether the grammarian can lay down conditions under which one or two or all three types will *invariably* appear. The latter can, with only slight reservations, give an affirmative answer in regard to the nasal and aspirate (spirant) types, except that he will, of course, have to say (and this is a most important caveat), that the conditions affecting the nasal do not refer to words beginning with *ll*, *rh*, and *m*, and those affecting the aspirate have no reference to words beginning with *g*, *b*, *d*, *ll*, *rh*, and *m*. The teacher will not, however, if he is wise, ignore even this moderate measure of order which the grammarian has found. But how does it stand with regard to the conditions affecting the "soft" type? We have seen that unless the pupil can place a word like *carn* in the right category out of the two known to grammar as masculine or feminine gender, he will not be able to

deal with the collocation *y-carn*, and this is true, as already said, of very many combinations other than those in which *y* occurs.

Let us look at some "soft" changes which allow of general statements being made concerning them. From this point of view we shall consider the following classes, in each of which it will be true that if one consonant takes the "soft" form, every one of the other eight mutables will also do so: (1) Here the mutated word, whether preceded or not by an interjection, is the common, not the proper, name of a person or thing addressed; (2) Here we have a single word *immediately* following a transitive verb, and constituting its grammatical object (the usual order observed in a Welsh sentence is verb, subject (if and when expressed), object); (3) Here the word follows a parenthesis: the latter separates it from the governing word; (4) Here a finite verb immediately follows the interrogative particle *a* (pronounced *ah*): this is also the case where *a* is understood but not expressed; (5) Here a finite verb immediately follows the relative pronoun *a* (pronounced *ah*), expressed or unexpressed; (6) Here a noun or adjective follows the (third person, singular, masculine, dependent) personal pronoun *ei* (his); (7) Here a predicate noun, predicate-adjective, or an adjective used as an adverb, follows the particle *yn*.* As a contrast to the other groups, we add, for convenience of reference, group (8). Here a singular adjective follows a feminine noun (the almost invariable order is (1) noun, (2) adjective). Many other instances could be included here. It is obvious that in this eighth class we have passed from the influence of a *general* to that of a *special* factor, namely, the gender of the noun concerned.

But to all the forces upon which the "soft" mutation found in these eight groups depends, counter-forces exist. Consider the following cases, one to represent classes (1), (2) and (3), another to represent (4) and (5), and another (6) and (7). In (2) the word immediately following the verb is often the subject: it is left unmutated. But a far more striking counter-force lies in the fact that the usual verbal form used to express certain tenses, for example, the imperfect, in the indicative mood of the active verb, ends in a verb-noun, and if a noun follows the latter (even when its finite form is transitive) and is governed by it, it is in the genitive case, and its initial consonant is as a rule not mutated. For the same tense, Welsh often uses a single word: the initial consonant

*But as *ll* and *rh* are not mutated after the definite article *y*, so they remain unchanged after this *yn*: indeed, the latter may originally have been a definite article. *Yn* has other meanings also.

of its immediate object undergoes change. In (4) and (5), to any influence exerted by the sound of the interrogative and relative *a*, that of *a* ("and") and *â* ("with"), all identical sounds, is opposed, for both the latter words govern the aspirate. In (6), the usual pronunciation of (a) *eu* (their), (b) *ei* (her), and (c) *i* (to) is identical with *ei* (his), namely *ee*: (a) causes no change, (b) governs the aspirate, and (c) the soft. In (8), a masculine noun does not mutate its dependent adjective, and no plural noun does so.

The very fact, however, that some of these counter-tendencies can be described, and can, at the teacher's will, be for any length of time he desires treated apart, is due to the fact that the forces controlling them stand in close relation to meaning: the mutations found in classes (1), (2) and (3) are not dependent on the inclusion, in the relevant sentence or phrase, of any particular word, but are valid (subject to the counter-forces referred to), when any mental function, such as address, or the idea of transferring an action described by the action-word used (i.e., a transitive verb) to the person or thing named by the word immediately following it, has to be conveyed. In (4), the main controlling factor is the fact that a question is being asked, but although many questions do not begin with *a*, its use, whenever it occurs, is significant and capable of being felt. Here then we have a general and also a special factor. The same is true of (5), except that the work done by the relative pronoun *a* is only vaguely felt by the child; indeed, the slight hold this word, like the English relative, has on life (note the sentence, "This is the house Jack built"), indicates that its functions are liable to be partly or fully usurped by other parts of the sentence(s) concerned. Its mutational significance can at first only be impressed on the young learner by getting him to understand and master sentences of a fully hypotactic character; for example, "This is the house *which* Jack built." In (6), the meaning conveyed by the masculine *ei* depends only in a slight degree on its sound, but to a much greater extent on its relation to the rest of the sentence, and especially to the noun which it represents: fortunately, Welsh often employs such a form as, *Gwelais ei gi ef*, "I saw his dog of him," where *ef* is an auxiliary affixed pronoun, third person, singular, genitive case, *masculine* gender: even if the reader has forgotten what the name of the owner is, he knows that he is a male, (a) by the collocation *ei-gi*, not *ei-chi* (this means "her dog"), and (b) by the use of the pronoun *ef* which is always masculine. The wise teacher will not in early lessons fail to keep this fact in mind. In (7), the slight significance of the special factor, namely, the sound *yn*, as

compared with the influence of the meaning, will be readily seen : the pronounced abstract nature of the work done by the phrase in which it occurs has been made evident by the necessity I have felt for introducing the term " predicate-adjective " into my statement of it. In (8) we see an instance like that fully described above in my account of the combination, *y* plus noun. Meaning here, except when the noun is the name of the male or female, plays a wholly subordinate part, for, as already said, no final reason can be given for treating *carn* as masculine and *cadair* feminine. There is nothing to be done but to get the learner to feel with more and more clearness that a word like *carn* belongs to one group, and *craig* to another : the words masculine and feminine need not be introduced for two or even three years, so far as the child who begins his Welsh lessons at seven is concerned.

Leaving out, for the moment, any reference to class (8), because of its limited character, it will be seen that in (1), (2) and (3), the question of mutation depends on the question whether the governing and governed words possess a certain general character : no special word is required to serve as a " cue " to the required mutation: the governed word is, however, only affected when it begins with one of the nine mutable consonants. In (4) and (5) also the meaning of the context is the predominant force : the " cue "-words become less and less important : in (6) and (7) meaning is again the principal consideration, but the " cues," *ei* and *yn*, must also be present in order to secure the right change.

B. (2) (c).—A SOLUTION OFFERED OF THE PROBLEM REFERRED TO IN B (2) (a).

Let us now return to the question as to whether, in the circumstances mentioned, a Welsh child of seven will use the initial soft *b* in *babell*, or the radical *p*, or nasal *mh*, or aspirate *ph*. I do not see how it is possible to maintain that the mental effect of transitive action conveyed by the action-word *gwelais* (" (I) saw "), is here of so vague a character that, although it is felt by a reflective consciousness, it is impossible for the subconscious to be affected by it : it must, on the other hand, be admitted that, although the subconscious uses such a category, it may do so only in a weak and uncertain way. Nevertheless, in view of the vast amount of organization done by primitive peoples in respect of the speech used by them (the highly complicated nature of certain branches of the Bantu family of languages supplies a most striking illustration of this), the conclusion cannot be avoided that among subconscious

processes this must be included and that it is one of the most important: accusative *inflections* in so many languages cannot otherwise be accounted for. It will be remembered that it is not claimed that in Welsh it was this subconscious classification that picked out for *mutational* modification those words and only those having one out of nine particular initial consonants, leaving others beginning with *n*, etc., uninfluenced. We have seen that this was a phonological process. Many, but not all, forms of the transitive verb then, as now, ended in a vowel,* and the initial consonant of many an accusative (immediately following its verb) lay between the latter's final vowel and another within itself (or such sounds as *l*, *r*, *m*, *n*, which have a semi-vocalic character); hence the inter-vocalic ("soft") mutation. But in early Welsh (as in other Celtic tongues) the accusative signification may still have occasionally appeared in actual inflections, similar to *um*, *os*, *am*, *as*, etc., in Latin. For a time, therefore, although the process of bringing order into the "soft" forms of the mutable consonants depended on the phonological factor operating on the first letter in the word, yet a general mental influence, as was once shown in inflectional changes at the end of the same word, also existed, even when the inflections had disappeared; this fact must be borne in mind when we try to understand how these mutational changes having a fairly regular character developed. So that although as the "soft" changes spread and became increasingly uniform and stable, accusative inflections wholly disappeared, nevertheless the two kinds of processes, namely, the phonological and mental, had been acting on words in the same kinds of sentences; consequently, sentences corresponding to a modern sentence like "Gwelais garn" (in which the accusative appears with its initial consonant in the "soft" mutation, but without any case inflection) increased in numbers and in regularity of formation, and formed the material on which, under like conditions, the subconscious tendency to modify certain initial consonants, such as *p* in *pont* (bridge), *t* in *tŷ* (house), *d* in *dafad* (sheep), etc., continued to operate from century to century.

In the case of the modern child we are considering, reflective awareness of the existence of these "soft" (as of other) mutations does not, *ex hypothesi*, emerge, and we must ask where, and, if so,

*The "soft" mutation is rarely found after the 3rd sing., pres. indic., active, transitive verb, in Early Modern Welsh (say from 1400 to 1600 A.D.), for that verbal form then, as now, often terminated in a consonant. This mutation in Welsh to-day is due to analogy (a tendency which is, I need not say, active at all stages of human speech); it serves to distinguish the subject from the object. (*Welsh Grammar*, J. M. Jones, 1913, p. 317).

in what way, the use of sentences containing transitive verbs of all kinds and (accusative) names of various meanings and showing no less than nine kinds of "soft" changes did, during the period from two years to seven, facilitate the use of the correct form *babell* in the instance given, and did this in face of counter-forces, some of which we have mentioned. For there can be no question that some facilitating process was at work: a Welsh child of seven is likely to give the correct form. Since the phonological factor must be assumed to be extinct, can there be any doubt that the preponderant factor was the use of sentences containing transitive verbs followed by accusative words *beginning with b*, but whose initial letter when forming the answers to such a common question as *Beth* (what) *yw* (is) *hwn* (this) (masc.)? or, *Beth yw hon* (this) (fem.)? was *p*; as, for example, in *pont*, *pren*, ("tree"), *pen* ("head"), *pedwar*, *pump*, ("five"), etc. That is, while, as said above, it cannot be denied that the influence on the subconsciousness of increasing skill in using sentences in which a transitive verb is followed by an accusative beginning with any one of the other mutated consonants, also works in a direction favourable to the act of mutating *p*, nevertheless the act of using the soft *d* in *dri*, for example, instead of the radical *t* in such sentences, can only in a slight degree tend to make the use of "b" instead of "p" more inevitable. *It is the continual use of those accusatives which begin with "b" instead of "p" that sets up an increasingly strong tendency to make this mutation in this connection, and so to use "Gwelais babell," and neither "Gwelais pabell," nor "Gwelais mhabell," nor "Gwelais phabell."*

C.—APPLICATION OF THE SOLUTION OFFERED ABOVE TO THE PROBLEM OF TEACHING WELSH TO ENGLISH CHILDREN.

If this analysis of the processes involved in producing a tendency in the Welsh child to use this mutation is correct, it follows that we must try to create in English-speaking children to whom we are trying to teach Welsh, a similar tendency towards mutating certain initial consonants in words forming the immediate objects of transitive verbs. Since our analysis has shown that the answer to the question whether the Welsh child we referred to will or will not say "Gwelais babell" depends, not only on his placing this sentence in a class of cases where the mutated word is subject to a *general* functional influence, but also on his learning and using many sentences containing accusatives beginning with *b* instead of *p*, the tendency to use *babell* instead of *pabell*, *bont* instead of *pont*, etc.,

will for a considerable time be only slightly reinforced by using sentences in which accusatives like *dri*, *garreg*, *ddafad*, *fara*, etc., occur instead of *tri*, *carreg* (stone), *dafad* (sheep), *bara* (bread), etc. In other words, the advantage a teacher can gain from utilizing his knowledge of the general influence exerted by a transitive verb on its immediate object is, in practice, very similar to that which he can draw from utilizing the fact that in any question in which *a* is followed by the verb the latter is mutated. In the former case, he must practise the pupil in using language in which the effect is felt of a general cause acting on words opening with one or other mutable consonant, and in the latter, the effect of a general and special cause acting on them. We must, however, bear in mind that the influence of skill obtained through using sentences containing accusatives like *babell* instead of *pabell*, *dri* instead of *tri*, and so on, will gradually "spread" from one class of words to others. But to introduce sentences indiscriminately, and from the first, containing words which, because of varying conditions, may show any one out of nine "soft," or six nasal, or three aspirate mutations, seems contrary to all pedagogical science. The "soft" changes to which accusatives beginning with a mutable are subjected must be separately practised: words with one initial consonant will at first hardly be influenced by those whose initial is another mutable. It is only much later after detailed treatment has been applied to all mutable initials that the work done on *p*-words will reinforce that done on *m*-, *d*-, and other words, and *vice-versa*, although, fortunately, when familiarity has been gained in dealing (say) with *p*-, *c*-, *d*-, *m*-words in the accusative case, detailed practice with other mutable words under the same condition will become less necessary.

The treatment of mutable words where the governing factors possess a special and a general character will not in principle differ from the above. For instance, in order to gain a mastery over the use of mutable verbs in questions opened with *a*, the child will have to be taught many questions beginning with this interrogative particle, but the verbs ought for a period to begin with one particular mutable, to be followed later by others with another mutable, and so on, so that a series of mental "moulds" will have been created into which new verbs used in the same conditions will fall; *c*-words into the *g*-mould, and so on. But as soon as one introduces such an illustration as a "mould," one feels its limitations: the moulds in a foundry are separated one from the other, but mental "moulds" are not. The use of "A welais i gi?" (Saw I (a) dog?), instead of "A gwelais i gi?" influences

and is influenced by similar questions where finite verbs in *g* follow *a*, and in a less degree, by others in which the initial of the relevant verb is one of the other eight mutables.

But I think the governing principle to which the above discussion leads can be formulated in more than one way. Instead of emphasizing the advantage of paying special attention for a considerable time to words (say) in *p* and to one or two of its mutations (it being understood that such words are easy to understand and to illustrate, and belong to those often required in ordinary conversation), one could, instead, confine oneself to various kinds of simple sentences in which words beginning with any one of the nine mutables would be employed first of all in the radical, later in their "soft" form, etc., each for a time used under one particular condition, to be followed later by the same form in a second, third, or fourth condition. That is, sentences can be selected by the teacher which contain mutable words of all classes, but governed now by one particular condition, now by a second, and so on. But in whatever way the principle is formulated some system of classification must be observed.

In a scheme* for which I was responsible, preference was at first given, in the questions, answers, and commands taught, to masculine nouns with initial *c* (*k*): they were followed by feminine nouns in *c*: for a little while mutation did not appear, except in counting, as *un clo* (masc.), (*clo*=lock), *dau glo*, *tri chlo*, etc., or *un gragen* (fem.), (*cragen*=shell), *dwy gragen*, *tair cragen*, etc.: later on, adjectives in *c* were introduced; these, as already said, remain unmutated after masculine but are mutated after feminine nouns. The necessity for using separate masculine and feminine words for "this" in a Welsh question corresponding to "What is this?" and for "he" and "she" ("it" must be translated "he" or "she"), in the answers corresponding to "It is a lock"=" (A) lock is he," and "It is a shell"=" (A) shell is she," etc., namely, *Beth yw hwn?* *Clo yw ef* (he), and *Beth yw hon?* *Cragen yw hi* (she), etc., supplied a means of building up a classification of which the pupil, with the help of supplementary pictorial devices, became gradually conscious, to which the feeling for the existence of two classes of names fastens itself: with this the different treatment of masculine and feminine nouns in counting as well as the use of adjectives, etc., coalesce. Side by side with this work, the various types of question-forms involving the use of different parts of the

*See "The Theory and Practice of Teaching Welsh to English-speaking Children without the Aid of English." (W. Spurrell and Son, Carmarthen, 1921).

verb "to be" were introduced in turn, as well as a form corresponding to "What is (was) John doing?" (Here the use of *c*-words was not always prominent.) In answers to the latter, such as "Y mae John yn (wedi) canu," ("John is (was) singing"), the radical form of verb-nouns in *c*, e.g., *canu*, appeared: later, in answer to the question, "Who sang?" the soft form of *c*, viz., *g*, was taught, e.g., "John a ganodd."

It must, however, be noted that although a special place was for several months given to words in *c* or mutations of *c*, a considerable number of words having other initial consonants or vowels was introduced and regularly used: this was done for the sake of variety of work, and because the absence of mutation in words beginning with vowels and *n*, *s*, etc., did not interfere with the subconscious consolidation of the work done on *c*-words. Indeed, I feel sure that the class of English boys to whom I taught Welsh on this scheme were not conscious during the first year that they were learning many more words in *c* and *g* than in *p* and *b*, *t* and *d*, etc., or, in the first half of the second year, more in *t* and *d*, and in the second half of the same year in *p* and *b*, than words beginning with the other mutables. Nevertheless, their growing capacity for using the necessary mutations in *c*-words could be clearly observed, as later in *t*- and *p*-words, and so on from mutable to mutable.

The answer to the question asked earlier in this article seems to me clear. A teacher of Welsh to English children ought to organize and classify the questions, answers, commands, etc., he presents to them, so as to make it easy for them to use words having initial mutable consonants correctly and to accelerate that subconscious organization of the mutational processes which must take place if the pupils are to gain a mastery over spoken and written Welsh. He need not fear that he will run short of material which will give his pupils many opportunities of speaking about those things they are interested in. The same principle of preparatory organization applies, *mutatis mutandis*, to the way in which other difficulties ought to be approached. It also applies, not only to the teaching of Welsh, but to that of all languages.

The Adolescence of the Young Wage Earner.

BY MARGARET PHILLIPS.

THE peculiar characteristics of "industrial," as compared with "normal," adolescence (supposing this latter to exist) may presumably be accounted for either by differences in intellectual endowment or by difference in sentimental development, or both. As regards the former, there has been, as far as I know, no comprehensive investigation into the intelligence of adolescents in industry—if only because of the difficulty of devising tests which will fit the years fourteen to eighteen. Nor has there been, as far as I know, any systematic following up into later life of children whose intelligence has been measured during their school days. But it will be generally admitted that workers in the lower reaches of industry are drawn, broadly speaking, from certain social and economic levels and not from others; and sufficient work has now been done to establish at any rate a rough correlation between intelligence on the one hand and social and economic status on the other. There are, of course, all sorts of factors which tend to modify this correlation—among them, periods of industrial depression; the good conditions of work offered by certain firms; and the existence of certain areas where the elementary schools are not yet thoroughly combed by the scholarship system. I have, in my own continuation school experience, dealt with a range of intelligence which has seemed as complete as it could well be. Nevertheless, it still seems true that the higher levels of intelligence are not, broadly speaking, found in the lower reaches of industry.

But even so, the main significance of such intellectual differences as can be established will lie in their influence on sentimental development. If we assume that there exists an original endowment of psychic energy, and that the sentiments are the result of this energy acting as an organizing force on the (psychic) environment, then poor general intelligence seems to imply such a degree of energy as is too feeble to work powerfully upon, or effectively to transform, its environment; which fails to select or to organize material in accordance with any principles; which cannot cut new channels through experience either to relieve existing tension or to irrigate new fields; which has no driving power to clear obstacles from its path, but can only gather itself up behind them until the banks are overflowed or the dam bursts. Bursts of temper or quarrelling; unexplained resentments; fits of destructiveness; smouldering

discontents ; long nursing of small grievances ; unreasonable or possessive attachments to persons, may all follow from this.

An even more dangerous state of affairs may result where psychic energy is strong, but an insufficiently stimulating environment has served to keep the sentiment at a low level of development. Professor Bower, in his presidential address to the British Association on " Size and Form in Plants," showed how, with an increase in the size of an organism, there must come a corresponding development in complexity of structure, if the relation of surface to volume, so essential to growth and equilibrium, is to be maintained. So it seems to be with the psychic organism—the sentiment. Where psychic energy is strong, the emotions, tendencies, and ideas in which it is embodied must be manifold, far-reaching, and in constantly developing and extending contact with " reality " if the mind is to remain healthy, balanced, and stable. If, on the other hand, the mind's " tentacles of apprehension " remain, owing to a defective environment, few and undeveloped ; if contact with the world is narrow, and outlets are restricted, then emotion becomes unduly strong, action tends to be violent, and expression crude and inadequate. As an illustration of such a state of mind, I quote from a training college student's account of a fortnight spent at a training centre for unemployed youths.

" There was one youth who had attended an elementary school until fourteen years old, and had had employment off and on for about fifteen years, and so was used to the routine of the school and to the masters, who were really a decent lot. Somebody, not the youth in question, made an objectionable noise, in the form of a cat-call, while passing through the school-yard when a drill lesson was in progress. The master in charge asked the youth in question if it were he. Immediately the youth whipped himself into a terrific fury and cursed that master for three solid minutes without pausing. After the debate following the drill lesson, the master went to the youth and apologised for having accused him. The youth's reply was ' You always pick on me,' and he qualified this with a further torrent of abuse. The next day the Principal asked the youth if he was prepared to apologise to the master, and so close the incident. Instead of being tactful, the youth pushed his face, which was admittedly not clean, to within half an inch of the Principal's and demanded to know why the master picked on him, instead of the right fellow. Well, no one likes to have a dirty face thrust almost into one's own, and the Principal said, ' Take your face away, or I'll knock it away.' ' Will you, you ——?' and the youth dashed off

his jacket and proceeded to spar round the Principal, trying all the time to egg on the latter to strike the first blow. Eventually the youth replaced his jacket and went outside at the Principal's orders. The Principal turned to go upstairs, and the youth, seizing upon a mean advantage, tackled from behind."

What now are the environmental faults which contribute to such a state of mind? Factors such as unsatisfactory housing conditions, and the mass production which has until recent years at any rate been the rule in our elementary schools, may have been active from the earliest years. More serious, perhaps, is the fact that in early adolescence, when the more fortunate classes are introduced to a wider environment, both physical and mental, and to greater opportunities for self-expression and social experience, the young wage earner may pass the formative years, eleven to fourteen, in precisely the same scholastic environment as before, and may at fourteen be introduced to a type of repetition work which, so far from being an advance on the opportunities offered to him at school, is in many respects inferior thereto.

To illustrate. The following questionnaire was recently set, by the courtesy of a firm of starch and polish makers, to 36 of their employees—12 boys and girls from the general office, 12 girls chosen from all parts of the works, and 12 boys from the sawmill and case-making departments.

- (1) What work do you do? Describe it as exactly as you can.
- (2) Did you choose your work, or how did you come to take it up?
- (3) What do you like or dislike about your work?
- (4) What would you most like to be, or what work would you do if you could choose?
- (5) Did you like or dislike your elementary school? Why?
- (6) What did you most like or dislike about it?
- (7) Were you glad or sorry when you started work? Why?
- (8) What do you mainly think about when you are at work?
- (9) Do you often dream at night? About anything special?
- (10) Do you enjoy continuation school? What do you most like or dislike about it?
- (11) What do you best like doing in your evenings, week-ends, holidays?
- (12) Do you like making things? If so, what?
- (13) Do you like reading? If so, what book or what sort of books do you like best?
- (14) Do you go to the cinema? If so, what sort of films do you best like to see?

- (15) Do you like the country? Games? Outdoor life?
- (16) Have you a favourite poem or a favourite picture? If so, what are they?
- (17) Do you go to Church or Sunday School? If so, do you enjoy it? Why?
- (18) Have you ever met in a book or in real life anyone you greatly admire? If so, what is he or she like?
- (19) Have you any $\left\{ \begin{array}{l} \text{girl} \\ \text{boy} \end{array} \right\}$ friends? Do you like boy or girl friends best? Why?
- (20) Do you look forward to getting married? If so, what sort of a person would you like your husband or wife to be?

Here are two typical answers to the question, "What work do you do? Describe it as exactly as you can."

Boy of 18.—"My work is wirebound case-making. The cases are made by five people in the first stage. One boy puts the lid and bottom of the case on to a moving track, while another boy puts the two sides on. The lid, bottom, and sides of the case are placed on what are called battens when they are put on the track. These battens are placed between blocks on the track by yet another boy. The case then moves under four hammers, which are worked by machinery. These hammers move up and down, and make and drive into the case wire staples. These staples fasten four lengths of wire along the case, and also fasten the boards to the battens. The machine is driven by a man. A lad then cuts the wire and the case is sent to the ending machines. *I cut the wire.*"

Girl of 17 years 10 months.—"The work I do is on a machine called a square blue wrapping machine. The room is rather a large one and the machines are arranged down the sides. There are five down one side and six down the other, with two larger machines in the centre. Eleven machines are the same, and I work on one of them. On the machine there is a big belt, which travels round and is connected with another belt and an electric motor, which works the machine. Two of us have to work one machine, one of us feeding it, the other taking the work out. The blue is pressed into squares, and brought to us on boards. The feeder of the machine puts the blue in the machine on a steel band; two of the fingers take the blue and put it into a box. At the same time as the fingers take the blue a wrapper drops from a brass hopper and the blue then goes along until a knife, which keeps dropping, wraps one of the sides of the wrapper in; it is then folded down at the top and further along it wraps the ends in with folders which move backwards and forwards.

The blue then comes out of the machine wrapped, and is put into boards, three boards making one cwt. The work is put on a platform, and when 14 cwt. is put on it is wheeled to another machine. This machine is one of those in the centre of the room, it parcels the wrapped work ready for the packing. *I work on one of the smaller machines, taking the wrapped work out.*"

In the last sentence of each paragraph there is hidden, I suggest, tragedy and disillusionment. The adolescent's natural attitude to his future work is one of eager anticipation. Adolescence is almost by definition, and has been from time immemorial, the time of initiation into the larger world of adult life, and the type of adult life to which the child turns is, almost inevitably, that which his immediate environment offers or suggests. The direction of psychic energy may be thus determined some considerable time before the child is due to leave school, as every elementary teacher knows. A training college student, describing life in her own Lancashire village, says, "Most children, from the time they go to school, look forward to the day when they will start work in the mill. I have seen children of ten and eleven years old fly straight out of school at four o'clock and amuse themselves with their sisters and brothers in the mill, filling the weft tins and kissing the shuttles, till stopping time." So in my own Lancashire experience I have known children look forward to starting work as to the time when they would have two eggs for their tea; while a child who did not display this keenness was regarded by other members of the family as "slightly daft."

Typical answers to Question 7 above (Were you glad or sorry when you started work? Why?) are:

Boy (16).—"The reason I am glad I started work is that I can earn my own living and repay mother and father a bit for what they have done for me."

Boy (18).—"The reason I was glad I started work was I was now able to help and to keep my younger sisters."

Boy (17).—"Glad, because earning a little money gave me a gentle spirit of independence which I always yearn for."

Boy (16 $\frac{3}{4}$).—"Glad. Something new. Fresh faces. A new start."

Girl (19.11).—"I was glad because I think when one starts work one is not a child any more."

Girl.—"I don't really know whether I was sorry or glad, not even now. I was sorry because I realized I was growing up, and I know now, whereas I didn't know before, that there is evil and good

in the world. I was glad, because I knew I would be able to help mother and as we had a big family I knew that every little bit of money would help."

Girl (21).—"Quite happy, because I was taking the first step in life."

But disillusionment may set in from the moment when school is left behind and employment is first sought. Typical answers to question 2 (Did you choose your work, or how did you come to take it up?) are as follows:

Boy (16).—"I would have liked a traveller's job, but there was only a vacancy in the saw mill, so I willingly took it."

Boy (18).—"I did not choose my work. The way I came to do it is—I was a spare lad and did odd jobs. One day a youth got finished, and I took his place and have since stayed there."

Boy (15).—"From the very day I started at the firm I was put to the job, and ever since I have been living in hopes of being given the opportunity of an apprenticeship, and I am still hoping."

Boy (19).—"I, like many other employees, did not choose my work. Desiring an employment, I put my name on the waiting list, and after a few months' waiting I started on the work I am now doing."

Girl (14.2).—"I was given two chances, to take the one I am now working at or to wait till I had a post given in the office, so I took the first one offered."

Girl (17.10).—"I did not choose my work. My mother and father asked me to work here."

Girl (19.11).—"I was put in B. Dept. as I suppose there was a vacancy."

Girl (18).—"I did not choose my work, but as it was the best offered to me, I took it."

Nearer acquaintance with the world of industry may bring a still deeper degree of disillusionment. I quote here from a training college student who had himself eight years' industrial experience in a railway works before deciding to take up teaching:

"When a child leaves school at the age of fourteen or even fifteen he leaves it with a picture in his mind of a new world opening for him. He is now leaving the world of children for a world in which he is to take his part with men; and he is very serious about it, because in his own way he has very big ideas about the important part he is to take in affairs. His attitude towards home life changes too. He is no longer under the sole care of his parents; he feels a certain responsibility, especially if he has younger brothers or sisters. This

responsibility is very often a real one, since he may be the only one apart from the father to help in the feeding of the family.

“ The adolescent’s picture of the new world is a rosy one, because he has painted it himself from his own limited experience, gained during school life. His view of life is now very ideal, and because he has had little or no experience of reality apart from school he feels very enthusiastic about the prospect of leaving school. This stage is also the stage when the child wants to do things on his own initiative.

“ Unfortunately, his spreading wings are soon clipped. He may go into an office and there he finds things very different from what he imagined them. His ideas of justice may be egoistic but, for all that, they are none the less true. Consequently, when his assertions and protestations, which seem quite legitimate to him as a citizen of a free country, meet with the slogans ‘ You’re here to do as you’re told ’ and ‘ I’ll report you to the boss ’ (no attempt is made to spare the feelings of the youthful junior !), his aspirations receive a hard knock. The fact is that his chief duty is to be neither seen nor heard, except at the bidding of a superior whose imagination, under the treatment now being administered to the new junior, has long since ceased to flare. In short, after a child leaves school, his normal aspirations are repressed. His opportunities to exercise his initiative are few and narrow in scope. The work and environment themselves are sufficient to repress most ideals. His office companions may not always be suitable objects for hero-worship. He will be reticent on sex matters, but in a few months, under the combined efforts of his work-companions to ‘ bring him out,’ he will be undesirably sophisticated. An incident from personal experience will indicate this. On one occasion, during a slack moment, three or four of the other fellows were having a smoke and a yarn round the fire. The yarn having reached its climax, one of the others leaned over the desk on which I was working and said, quite amiably, ‘ Look at Alf. laughing.’ I hadn’t been laughing till that moment, not having ‘ seen ’ the point, but of course I had to laugh at that. At the time I was sixteen.”

Where such disillusionment occurs, there appear to be two main ways in which it is met. There are those who do battle with their world, striving to some extent to adapt the environment to themselves rather than merely themselves to the environment. More numerous are those who resign themselves, at any rate outwardly, to the world as they see it, content to let themselves be moulded as circumstances dictate and allowing such psychic energy as the demands of daily life leave over to flow in channels of fantasy.

Thus the former type may make what sometimes seems a pathetic attempt to conquer destiny—refusing, as it was once put to me, “merely to exchange the frying pan for the fire, when what I want is to get out of the kitchen altogether.” Accomplishments are often looked to as a means of rising in the world. A continuation school student once wrote thus of her brother, a collier :

“My brother has done some beautiful oil painting and is just finishing one of the child Samuel, and it is really lovely. He has had a splendid chance of painting—through the coal strike—and Mr. W., the artist, says he will be more than foolish if he goes down the pit any more.”

And many continuation school girls cherish a wish to write, and shyly offer books of poems, essays, or short stories for criticism.

In these respects the questionnaire reveals a striking difference between the clerks and the repetition workers. The office boy or girl appears, generally speaking, to choose his or her work, to identify himself with it, to find it varied and interesting. Where the work itself does not entirely absorb his thoughts, surplus energy appears to be focussed on the possibility of promotion in connection with it. If he cannot solve his problems satisfactorily in the real world, he carries them over into his dreams. The following, written by a girl of seventeen, should please the psycho-analyst :

“I am the junior of a Registrar’s Department. The work is very varied. I do a little shorthand and a good lot of typing. I use the adding machine and the addressograph and do all sorts of little odd jobs. The thing I most dislike doing is typing certificate receipts and envelopes . . . I nearly always dream at night, and often about work. I dream of the most impossible things happening ; for instance, I dreamed, only the other night, that the secretary rang for me and asked me if I thought some certificates that he was sending out read all right, and if not, how they wanted altering, and when I told him they did want altering, he altered them.”

And here is a realist who finds in his work interest, stimulus, and opportunity.

Boy (16 $\frac{3}{4}$).—“My whole day at work is spent upon letters. Copying, filing, sorting, and hunting up letters for reference. Every minute is of interest. I can honestly say I do not experience one dull period.” . . .

“Upon my first being able to think with reason (by this I mean when I was out of the fireman, engine driver, and sailor stage), my mind has always focussed round being a commercial traveller, and this is what I am striving to become, and I think if my station

in life were higher, my mind would still be the same in this direction. . . . I find that my work absorbs nearly all my thoughts. I sometimes think of my future work, what it will be; if it will be in the office, or shall I get out? "

Apparently then clerical work does not constitute a pressing psychological problem. But the way out for repetition workers is less easy. Instead of providing a spur to effort and a stimulus to development, the work offered may make dangerously little demand on either mind or body. Thus gradually and insensibly psychic energy tends to leave the real world and to disport itself in realms of fantasy. Hope and interest are no longer centred in work and promotion, but in leisure and its possibilities. New standards are adopted; new tests applied. The world is at once completely accepted and completely rejected.

Characteristic answers to Question 3 (What do you like or dislike about your work?) are as follows:

Girl (18).—"The only thing I dislike about my work is the monotony of it, but what I do like is the easiness of it."

Girl (17.10).—"I like my work because it is easy and there are a lot of nice girls in my room and a good forewoman."

Girl (17).—"There is nothing that I dislike about my work; in fact, there is everything that I should like—it is clean, easy, and pleasant."

Boy (18).—"The work is monotonous."

Boy (18).—"The thing I dislike about my work is I never get a change—always doing the same thing."

Boy (19).—"I like to keep going at a steady pace, pass the boxes on and receive no complaints. I dislike work where the wood varies considerably in thickness and causes the nails to miss the wood, which is very annoying when the machine is working quickly."

Boy (19).—"I like my work because I have mates alongside me to speak to."

(Boy (17)).—"You have too long rests and you get bored."

Boy (18).—"There's only one thing the matter with my work—it's too easy."

And to Question 4 (What would you most like to be, or what work would you do if you could choose?).

Girl.—"My ideal in life and the work I would choose if I could would be to go on the stage. To be a great actress and singer, and to sing and dance my way through life, and to give other people pleasure."

Girl (18).—" If I could choose I should be a collector of rare articles and antiques, so that I could travel, providing I had enough money, and pick up things from different parts of the world."

(*Girl* (14.2).—" If I could choose I should like to go in an office, or be a hairdresser."

Girl (18.2).—" The work I would most like to do would be a teacher of sport."

Boy (18).—" I should like to be a cabinet-maker."

Boy (18).—" The work I would do if I could choose it would be an electrician's labourer."

Boy (17).—" To have a job that changes now and again and not always be doing the same thing."

Boy (19).—" I should like to have a job doing business in different towns for my firm, so as to enable me to see England."

And perhaps most significant of all to Question 8 (What do you mainly think about while at work ?).

Girl (19.11).—" I think of lots of things while I am at work, but I admit I am always thinking about the times when I have been out, and times to come, with a certain young man, as all girls do."

Girl (18.2).—" What I mainly think about at work is if I am going to be in the cricket match or netball match that night."

Girl (17.10).—" When I am at work I think of what I can do in the evening, or what new clothes I am going to get, and about my friends."

Girl (18).—" I think about my appointment for the night if I have one, and of good times I have had, especially if there has been plenty of fun. I often laugh to myself thinking about them."

Girl (17).—" There are many things of which I think, but mainly of my future life, of what I shall be ; where I shall be. Sometimes I make stories up and think of them being read by the world."

Boy (18).—" I often think about the poor people out of work."

Boy (17).—" About the people who have not to work for their living."

Boy (19).—" My thoughts wander to various subjects, including holidays, other people less fortunate than myself, and plans for the coming week."

Boy.—" I dream I am a champion in different branches of sport."

The unsatisfactoriness of this general attitude needs little comment. A friend once wrote, " I have always held that the highest good in life is the doing of a job well which calls forth the best

activities of one's mind." One is reminded of Aristotle : " Happiness is energy—a thing consisting in our own exertions ; and the life of a good man consists in a series of virtuous and delightful energies." Between those who have known this highest good, and the repetition worker, a great mental gulf—perhaps the greatest—is fixed. Life has once been seen as a call to adventure, and work has stood as the symbol of adventurous living. Now the hollowness of the symbol is revealed.

With the abandonment of the symbol goes sometimes the relinquishment of the adventure itself. The same non-fighting, non-living attitude may develop in other spheres—notably in those of leisure and of personal relationship. In this latter sphere at least one would have supposed the possibilities of satisfactory experience, or at any rate of experiment, are open to all. Yet those who have given up the struggle in other directions tend apparently to do so here as well. To illustrate : Adolescence is notoriously the time for the development of a new interest of the sexes in each other ; it is at the same time the period of fast friendships between two members of the same sex. But where friendship with the opposite sex involves, among other things, exploration of new territory—psychic adventure—friendship with one's own sex may ask nothing more than a perpetuation of familiar tastes, sentiments, emotional habits, and points of view ; and remaining quietly at home in the world one knows already, instead of following Kipling's immortal adjuration to " buy a ham and see life." Such an attitude is exemplified by the following answers to Question 19 (Do you like boy or girl friends best ? Why ?)

Girl (17).—" I have very few boy friends, but a good lot of girl friends. I prefer girl friends. I may be behind the times, but I feel uncomfortable and tongue-tied in the presence of boys ; that is unless I know them very well—then I am anything but tongue-tied."

Girl (19).—" The only boys I have met I know are those at Chapel, and I am not struck on them. I like girl friends best, because you can tell all your troubles to them and exchange confidences and often your friend has things in common with you. Sometimes I think I would like a nice boy friend like my sister has, *but that soon passes.*"

(This last phrase is, I believe, perfectly sincere. The impulse to adventure in such a mind may be only short-lived.)

Boy (19).—" I have plenty of boy friends. I think they are best, because they are more understanding and reliable, can speak and think the same as yourself, etc."

Boy (19).—" I like boy friends best because they are easier to deal with. We understand one another, and girls take a lot of understanding, but I like a walk with a girl friend, to see other people's views of life."

One welcomes in the last answer a hint of the spirit which in this department of life, as in others, goes forth and grapples with the world. So in the following :

Boy (18).—" It is hard to tell, because when you go with boy friends you think it is great, and when you go with girl friends you think the same."

And, at more length, in the following extracts from two consecutive letters written by a cotton mill worker aged 16.

" I am going to ask you a question. *Why are boys stupid?* During the past two or three months Edith and I have been very friendly with four boys, and have gone walks and often sat sewing on the field beyond the one belonging to the school. Up to last Sunday we were six good friends—but *last Sunday* altered and spoiled everything, or rather *I* did—but had they not been so beastly *stupid* things would still be right, as they were before.

" Three of the four smoke—you yourself know that almost every boy here smokes—sometimes before he has turned sixteen. Well, I took it in my mind to stop them if possible—so on Sunday night (Sunday of all nights) we started talking about habits that some people have, and they said that smoking was the worst habit to break off. I, with all my heart and soul in it (and lungs as well), said in return it was not a habit—but a silly thought that they had got in their heads that they thought they looked big and brave.

" They didn't receive my remarks in the exact spirit they might have done, and we argued and argued until one thing brought up another, and not wishing to be beaten, I ended it all by walking away with my nose in the air; and thus we quarrelled, and we are not friends yet.

" They won't make the first step towards peace for fear we think they are admitting defeat and we won't for the same reason, and so six of us are all miserable for nothing. So I don't see why they couldn't be sensible and listen, instead of arguing with a girl—it's no use, and I told them so. Therefore, I think they are stupid, don't you?

" Yours much perplexed,
" B."

" I am going to take back all I said about boys being stupid, you see we are all quite friends, and I am absolutely forgiven. Of

course I had to give in (just to save argument) and admit that I had said some awfully horrid things, which I needn't have done. I daresay it would please them a great deal if they knew that you disagreed with my saying boys were stupid, and would no doubt feed their vanity, so I shall not tell them what you had to say—though I agree with you now. It doesn't do at all to flatter boys."

The same contrast of attitudes may be further illustrated by the answers to Question 20 (Do you look forward to getting married? If so, what sort of person would you like your husband or wife to be?) They reveal two dominant modes of thought—that which clings firmly, though unromantically, to solid earth, and that which prefers to seek satisfaction in dreams. In some, the two modes are comically blended. Thus here is the complete realist :

Girl (18).—"Yes, I look forward to getting married and my husband must not be perfect, or I should not be able to keep up with him. He must have a sense of humour ; must not be unreasonably jealous ; must be able to adapt himself to my moods and not get impatient if I am feeling tired. In other words, it must be my best boy friend of the present."

Girl (14.9).—"I should like my husband to work in a factory and be fond of gardening."

Girl (21).—"Yes. Already suited."

Boy (17).—"No. Before I ever think of marriage I shall want a fair-sized bank account."

And the type which makes the best of both worlds :

Girl (19.11).—"Yes, I look forward to 'getting married,' and I want my husband to be one who will care for the home, not one who likes pleasure at clubs, etc., outside the home. He must be a lover of children. He must be tall, as I am tall myself, and fair, the contrast of myself."

Girl.—"I should like my husband to be tall and dark, with happy smiling eyes, who did really like me, and would not forget when we get married that there was such a thing as walking on the outside and opening the door for you and little things like that, and when you had a new dress on, or a new hat, to notice it. I don't want him to swear or drink, but I want a good husband and a good father. What I don't want is a goody-goody man or a stupid sort of man."

Girl (17).—"I look forward to being married, but not for a few years yet. The type of man I want for a husband is a clerk, but one who is ambitious, fond of sport, and witty, yet who is fond of the home."

Girl (15.2).—"The man that I should like to marry would be taller than I, any complexion, preferably fair, to work in an office, and be rather accomplished. To play the piano well, and to own a motor cycle. I should like him to be very cool and humorous. Be able to dance and be sociable to everyone."

Boy (18).—"Wife—gay, homely, active, interested in sport, intelligent, a good cook, good looking and intellectual."

And the sentimentalist :

Girl (16.2).—"I look forward to getting married to a strong, self-willed, trustworthy, hardworking husband of a jolly nature, musical, a good dancer and fond of sport and outdoor games. In stature tall, dark, ambitious nature, cheerful, happy-looking man. One who loves his home and takes a pride in it."

Now to pass from the psychological data to the educational problem. How, where the unadventurous type of mind is encountered, or the retreat into fantasy has begun, can satisfactory sentimental development be induced to take place?

The secret evidently lies in a transformation of the environment. A physical analogy will perhaps help. I have in my possession a photograph of a girl of seventeen—a side piecer in a cotton mill—small, thin, white-faced, red-eyed, and scanty haired; and another taken three years later, after her emigration to Canada, showing rounded limbs, a body generally filled out, and a complexion as blooming as that of a Brighton belle. The influence of the physical environment on bodily development seems to me parallel to the effect of the mental development on the development of the sentiments, and those of us who have worked in continuation schools have, in so far as we have succeeded in providing a richer environment, seen the corresponding mental change in some degree take place.

Thus, quite early on in my continuation school experience, I received from this very girl a letter containing a six-page account of a mild attack of ptomaine poisoning, with all symptoms described with gusto and in detail, and the whole inscribed "very important—at least to me." (Round so trivial a nucleus can mighty emotions gather, where a more worthy centre of reference is lacking.) Later on, the writer proved to be one of the most intelligent and receptive of pupils, whose mental growth could be seen, almost from day to day, to be taking place.

This being so, from what point in the environment can the attack be launched? What jumping-off place can be found, or initial impetus given? Speaking for adolescent girls, one cannot do better than quote the wise words of a former head mistress of a continuation school.

" There is a famous picture of Hope, blindfolded, with all the strings of her lyre but one broken, sending one solitary and repeated note, her last, into interstellar space.

" That picture represents many of these young workers. One single strand of interest is preserved, one string only one can be sure will vibrate, namely, this interest in personal relationships. Left to themselves, they tend to sentimentalize and sensationalize whatever personal relationships come their way, either by actual experience, or, at second hand, through the cinema. This interest in people is the teacher's one remaining road along which he can lead the class out into the freedom and healthiness of disinterested interests ; his one remaining tool which he can depend on to effect his purpose."

People—stimulating, idealized, admired people—preferably in real life—ministers of religion, captains of Guides, managers of works, continuation school teachers, club leaders, but also characters in books, can call out the full force of whatever psychic energy is available. Answers to Question 18 (Have you ever met, in a book or in real life, anyone you greatly admire?) include the following :

Girl (18).—" Yes. I have met many people in life that I admire but only one in a book, and that one is David Rivers in " The Following of the Star," by Florence Barclay. I think he is just wonderful, and very real, to me at least. In real life I admire many people. In some cases, my admiration has been kindled into hero-worship, and in other cases I merely admire without really liking them.

" Most of the people I admire do or say things that I cannot do or say, but would like to ; for instance, our gym. mistress, whom I admire very much, can of course do anything in gym. This I should like to be able to do, and our minister, I would love to be able to sing like he does and say the things that he does, and so I more than admire him."

Girl.—" The person I admire most is our Ranger Captain. I don't only admire her, but I love her. Our Captain is cut out for a mother, and when you are at war with the world and you are feeling fed up, you just have to look at her smile and then it all goes and you could kick yourself for being so nasty."

Girl (15.2).—" I have met someone in a book and someone in real life who I really do admire. The first is a gentleman in real life. He is the minister of my chapel. He is very accomplished and can sing beautifully. He puts his golden voice to good purposes. He has no favourites, but is a favourite, and his sermons create a great interest in the town. The second is the heroine of a book

entitled " Little Women." She is Jo, the eldest but one of a family of girls. She has a good sense of humour, and can find a laugh at any time. She is very impulsive, but lovable for all that. These two are the two that I mostly admire. There are many that I look up to, including the Duchess of York, a manager at my works, one of my Sunday School teachers, and Amy Johnson."

Round such centres, powerful, dominant, formative sentiments may grow up. Moral ideals will be formed and in some degree realized. Æsthetic taste will develop, slumbering creative capacity will be called forth, interests will prove contagious, and may finally generate sufficient strength to stand alone. Led by an admired personality, young wage earners will join clubs and causes ; attend meetings and places of worship ; read books and write poetry ; develop an interest in pictures, in nature and in music ; go camping and walking ; struggle to acquire virtues and skills, all in the first place as a by-product of psychic energy focussing itself on some one person thus gifted, occupied or interested. The record of any successful continuation school teacher's or club leader's experience is a record of such development on the part of her charges. In so far as it takes place, the opportunities of leisure can compensate for the spiritual poverty of rationalized industry, and the adolescence of the young wage earner will approximate to that of his more fortunate fellows.

An Educator's View of Thinking as a Vital Process.

By MARY HAY WOOD.

A PAPER READ AT THE NINTH INTERNATIONAL CONGRESS OF PSYCHOLOGY (EDUCATIONAL PSYCHOLOGY SECTION), SEPTEMBER, 1929.

My only justification for writing this paper is that of the general practitioner who, having to deal with the everyday symptoms of his patients, may bring to the notice of the specialists certain methods which have seemed to him to promise amelioration of those same patients' general condition.

The difficulty that besets the "plain man" or the student in training, who has not studied any philosophical subject before, is primarily one of terminology. He has accepted without question the current use of such terms as "mind" and "body" (though he may have had searchings of heart about "soul" and "spirit"), and he will cheerfully make use of such terms as will, imagination, reason, intelligence, conscience, memory, as standing for definite entities or faculties in the make-up of the individual. He will base conclusions on the division of education into "mental," "moral," and "physical," and will be ready to resent the suggestion that these do not represent separable "sides" or "departments."

Psychology has perhaps succeeded in shaking the plain man's belief in "faculties," but the overpowering tendency to hypostasis (which is inherent, I suppose, in the very use of general and abstract terms) leads him to fill their place with "instinct," much as the pagan worshipper when he turned Christian accepted local saints in place of local deities.

The business of psychology, like that of every other science, is to bring order and clarity into the conceptions of the plain man, so that he may recognize the underlying principles and grasp the meaning of the phenomena presented to him. In other sciences we have seen the same process of sifting out and examining the traditional generalizations—breaking down in order to reconstruct—in the work of a Copernicus, a Darwin, or a Lister.

Psychology is perhaps the most difficult of sciences, since its subject matter is in everyone's mouth and hardly a page of literature, whether fiction or history, is free from its implications. Here we are met by the unquestioned dualism implied in such terms as "soul and body," "mind and brain," "mental and physical," "spiritual and material."

Is not science already suggesting with more and more insistence that what seems like ultimate duality is really only the dual aspect of reality? Notably in physics, where the concept of "energy" is superseding and comprehending that of "matter."* So our concept of "life" must comprehend "spiritual" and "physical." What is this concept which applies alike to the unicellular organism and to man? The concept seems to involve essentially activity, reaction to stimulus, yet directed to the continuance of the organism—in other words life means self-direction, self-fulfilment, as indeed Aristotle, the founder of psychology, set forth when he described *ψυχή* (εἰη ἂν ζῆτελεχεία ἡ πρώτη σώματος φυσικου οργανικοῦ) as "the earliest implicit perfect realization of a natural body possessed potentially of life," life is for him the progressive realization of what the organism has it in it to be.

This is a conception which lies behind all natural science as well as psychology. We hear constantly from the physiologist or biologist of the *purpose* of the various organs and mechanisms with which he deals.

It occurs even in the realm of physics. Thus the President of the Chemical Section at the British Association in Leeds in 1927 says: "It is evident that the cause of chemical combination is the *striving of atoms to attain* more stable arrangements of their planetary electrons by some kind of redistribution."

Again I quote a biologist, Dr. Bidder, dealing with "the ancient history of sponges":—"All the choanoflagellates, all the sponges and all the intermediate ancestors were microphagous, that is, *evolved to supply* their component monads with food in the form of minute particles. We know now that in most sponges these pores represent only the most exterior of two, three, or more filters *interposed to prevent* access of larger bodies than those which the collar cells ingest."

Thus too a famous physician, Sir J. Mackenzie, a great heart-specialist: "We find that a living cell is never at rest but is always either discharging energy, i.e., performing its function, or renewing it . . . When the living cell discharges its energy, i.e., when it performs its appropriate function, it discharges also, at the same moment, an impulse or an influence, which affects neighbouring cells and either hastens or delays the process of the renewal of

*Cf. Professor Hobhouse in his foreword to the Report of the British Institute, Philosophical Section, July, 1929: "What we call matter is not the one permanent substratum of all change, but a rough formulation of the way in which processes of the real go forward."

energy in them. To these effects the names 'stimulation' and 'inhibition' respectively apply. . . . "

But we found in addition that the cell impulse exercises another influence, namely, control. In certain cells this power of control is much more highly developed than in others, examples of highly developed control being the group of cells in the heart, known as 'the pace-maker,' because of its influence on the rhythm of that organ. Certain nerve cells possess the same power. It is by the influence of these structures that the organs of the body are caused to work harmoniously.

I quote these, not as authoritative statements of fact, but to show the concept of life held by the scientist. He does not think of the cell as possessing "body" and "soul" or even "matter" and "life," but as a living organism interacting with its environment and working towards an end, viz., its own fulfilment. Here then is the unity that may supersede the dualistic notions of popular thought. The individual life is a process of self-realization, the potential activity finds its scope and fulfilment in the environment, and advance is first of all, in the pre-natal stage, by a process of differentiation and development from unicellular to multicellular, each cell or organ striving towards its own perfection and function as a part of the whole; then comes the post-natal life when the various organs reacting in their specific ways become co-ordinated to form more and more definite "reaction-patterns" in response to the stable elements in the environment. So, e.g., the constant presence of mother or nurse calls out in the infant a more and more complete and immediate response, an immediate and co-ordinated *tendency towards* the whole business, e.g., of being nursed and fed, or put to sleep.

This tendency or "set-towards" a particular series of actions is felt all through the organism, as shown by a certain emotional aspect of the whole reaction, e.g., by gurgles of satisfaction and excited anticipation, so that the first mere beginning of the stimulus, the first note of the lullaby and the *feel* of the nurse's arms has a "*meaning*," i.e., will "string-up" the whole reaction. It is this feeling of preparedness, the sense of familiarity—"hullo, here we are again"—which is awareness or "consciousness." We "see our way," no longer blindly reacting but "recognizing," "knowing."

So our so-called "mind" or mental process is after all the familiar business of life, the organism finding *itself* in its appropriate fashion.

When we say an infant “ knows ” his father or his mother what we are describing is his ready response with a prepared “ reaction-pattern ” to the familiar stimulus, e.g., of voice or touch, his sense of competence as opposed to the less sure adaptation to a similar but unfamiliar stimulus, e.g., if a stranger offers to take him. So the world of things becomes real for him *pari passu* with his acquiring of reaction-patterns appropriate to these repeated stimuli or “ situations.” He “ knows ” his nursery, his cat or dog, as well as the persons about him, and he is becoming already this or that kind of person according to the reactions he is acquiring (e.g., as regards his habits of sleeping and eating he may become regular and orderly or the reverse).

“ Names ” will presently play their part, being a readily reproduced factor in a situation and therefore a ready mode of re-awaking the familiar reaction. When he himself has learned a new pattern by the repeated reaction of his organs of articulation he has a new means of controlling the situation. New “ meanings,” i.e., ways of response, are multiplied, he even finds himself changing the situation by reactions of hand and foot and tongue, and tastes the joy of the creator or inventor.

In all this there has been no mention of “ instincts,” indeed there is a danger of earmarking this or that form taken by the life energy as though it were ready-made. If life for each organism is the process of finding itself and its “ nature ” (*φύσις* as Aristotle says—“ what it has in it to be ”), the shapes or patterns which the activity takes in response to this or that situation are the manifestations of this “ nature,” and so far as they appear spontaneously and without a preliminary “ groping ” we call them natural or instinctive, i.e., “ dyed ” or “ soaked ” in. The form of activity that we might call supremely “ instinctive ” in a human being is surely the getting a grip of the situation and securing control by repeating appropriate reactions until he has “ got the hang ” of them, mastering the situation, and this by co-ordination of the various mechanisms set going by the stimulus. So a baby will repeat the action of shaking his rattle or throwing down his toys and so, in response to the Montessori apparatus, he goes on until he has got hold, until he “ knows ” or comprehends the problem he is dealing with. “ Kennen ” and “ können ” are in fact the same process.

The fact that this is the “ natural ” activity is shown by the supreme contentment that results. There is no pleasure as keen as that of achievement, and again note the effect if he *fails* to “ find

a way,' an appropriate reaction—the whole balance and harmony of life is disturbed—crying may result or the emotional effects we call “fear” or “anger” or “disgust.” In these cases, as we know, the vital energy, either finding no prepared outlet or being in excess of what can be thus used, spreads over the whole organism, affecting the “sympathetic” system which controls the reflex activities of sweat glands, blood supply, respiration, etc.

Here let me quote from a recent popular scientific work in order to indicate once more the need for revising our terms.* The author says: “Our whole development from the cradle to the grave is an expression of the activities of hormones. . . . All the hormones should work in harmony, but frequently one kind of hormone is stronger or weaker than the others and seems to exercise a predominating influence in the body, a disorderly influence which may make itself felt as a disease. . . . In strong emotions adrenalin is poured into the blood, releasing a supply of energy which enables us to perform feats of strength or endurance surprising even to ourselves.”

The writer goes on to expound the matter as follows: (the italics are mine), “Danger arouses the instinct of self-preservation and you suffer from fear. You see a 'bus bearing down upon you and leap out of the way only just in time, breathless, knees trembling, heart beating quickly, mouth dry, tongue cleaving to the roof of the mouth. It (adrenalin) is the means of inspiring us, it draws blood from the digestive system and sends it to the brain and limbs. In an emergency hunger must wait, *the mind must be alert*, the limbs prepared to act. Adrenalin *orders* the liver to release more energy, in the form of sugar, to be burned in the muscles in order that work may be done. The heart beat is more rapid, and the demands for further supplies of oxygen must be satisfied by breathing quickly and deeply.

“You can prove[†] that this is the effect of adrenalin, because if you inject adrenalin into the blood stream all these symptoms appear. The experiment has been made with dogs and cats. The hair is raised on end, the eyes dilate to see more acutely, sugar increases in the blood, the food canal forgoes its demand for food, the sweat glands are opened, and the blood coagulates more quickly so that there is less danger of bleeding to death in case of a wound.

“So you see adrenalin prepares one to fight; it makes men brave, lack of it makes ~~men~~ men cowards. People with efficient

*From “Six Talks on Heredity,” by Mary Adams, M.Sc., 1929.

adrenal glands can be relied upon in a crisis and have reserves of strength enabling them to make quick decisions in an emergency and to resist fatigue. They will pass through shock or strain unshaken. Clearly it is useless to have a *brain* which can make the right decisions unless one possesses a supply of adrenalin to support it and to enable the *body* to carry out its demands."

I quote this passage in full because of its implications. It is written by a physiologist, but does not hesitate to make assertions of a psychological kind. The "brain" can make decisions and the "body" carries out its commands. The "mind" must be alert. There is confusion of thought due to the underlying assumption that mind and body are somehow separate entities. Emotions and instincts are treated as entities instead of ways in which the organism reacts. The description lands us with the inevitable suggestion that we are "gland-controlled marionettes"; this, it is true, is negated by the author, but in very unconvincing terms. "Temperament can become character by training and control," we are told. "Hormones may be harnessed when we know more about them." Harnessed to what? Controlled by what?

If we go back to the description we can re-interpret it so as to overcome the conflicting dualism. The self is realized in so far as the situation is comprehended, i.e., in so far as an appropriate reaction-pattern is available. A child with sufficient experience will jump out of the way of the approaching 'bus, the suddenness of the stimulus will cause increased metabolism, bringing into play the sympathetic system, in other words, rousing emotion, the whole co-ordinated self will in that case rise to the "situation" which calls out all its available energy.

The making a decision *is* the stirring up of the appropriate reaction, the putting it in train, as we see the cat strung-up for a spring when the mouse appears. The process involves the whole organism, though no doubt the centre of co-ordination is the brain. My adrenal glands do not control me since they *are* in a sense me. I might as well say that my courage or my will controls me.

To say "danger arouses the instinct of self-preservation, you suffer from fear," is to introduce two new mental entities, "an instinct of self-preservation" and "fear," whereas the reaction is determined as always by the striving of the organism to meet and grasp the situation, and as always its capacity is limited by its experience, the less familiar the situation the more diffused and unco-ordinated and "blind" the reaction. The more familiar it is

the more definite and ready the response. Again "in an emergency the mind must be alert, the limbs prepared to act." Here is a confusing redundancy, the self must be prepared to act and such preparation means a co-ordinated reaction, which of course involves the limbs.

Again, the "meaning" of the situation for each of us *is* just the tendencies that it sets going. Show someone an object, a place, a person that "means" a great deal to you, and unless his previous experience tallies with yours you will be disappointed. The sharing of common experience is the tie between members of the same family; things "mean" to them what they cannot possibly mean to an outsider.

I have suggested above that the essential characteristic of human activity is the "getting a grip" or "the hang" or "the meaning" of the situation. In Browning's words:

" This world's no blot
Nor blank—it means intensely and means good,
To find its meaning is my meat and drink."

It may be replied that animals' activity, too, is similarly directed, e.g., McDougall inferred from experiments with his dog "that while the dog's behaviour was from the first purposive, the goal and especially the steps towards the goal became more defined in the dog's mind as he became more expert in his task." The difference, in fact, seems to be rather one of degree than of kind. The more complex the co-ordination of reaction-patterns becomes, the more comprehensive and varied will be the meaning. Purpose and meaning arise out of—in fact *are*—the skilled reactions of the (so far organized and adapted) self to the situation as it presents itself, e.g., the dog getting food from the puzzlebox or the engineer building a bridge over a river, but the latter has acquired reactions, e.g., of tongue and hand and eye, which further objectify the various meanings as they arise, giving them coherence and permanence; by drawing or verbal description he can "define the steps towards the goal" in such a way as would be impossible without language or the use of symbols.

Consider what an infinite number of such "steps" embodied and objectified have gone to build up such permanent achievements of human activity as writing, drawing, sailing, flying, building, and how these make available such meanings and purposes as, for instance, that of the British Arctic Air Route Expedition lately published in *The Times*.

The purpose is to investigate the ice-cap of Greenland, planting a meteorological station on it, and incidentally "to make a complete air and ground survey of a largely unmapped stretch of Arctic coast. The station will consist of a peculiar hut composed of two layers of thick canvas, stretched, with an insulating space between them, over a dome-shaped frame. A snow house will be built over the entire structure. It will be heated by a Primus radiator and there will also be an electric radiator worked by a small windmill. The hut will be equipped with all sorts of meteorological instruments, and there will also be a wireless transmitting and receiving station. The station will be at least 9,000 feet above sea level, and it is possible that the lowest temperatures ever experienced anywhere in the world will be recorded."

Here is a striking illustration of the development of new purpose and meaning, in other words the acquirement of new co-ordinations (reaction patterns); a new configuration of habits, new skill, resulting in a new mastery of the situation.

The concept of "imagination" as a "faculty" dies hard. Children playing at being soldiers are described as "having so much imagination." What are they doing? Reacting to the situation, trying to get the hang of it. Seeing the soldiers marching sets going their own legs, and they do it too. There is no other way of making it their own. We grown-ups don't need to do it because we have mastered the reaction already.

Desire, purpose, what are these and how do they arise? The desire for food is the inward craving of the organism for sustenance, reinforced by all the experiences that have become a part of the whole reaction. The first blind crying soon gives place to the expectant cry, that is to say, the feeding reaction is all ready to be touched off, then comes in all the accompanying experience so that it too colours the condition of expectation and preparedness.

Purpose can only arise out of experience; it is again the stringing-up-towards, the preparedness-for, a particular reaction. The more complete our grasp of the situation the more clear our purpose becomes, e.g., the purpose that gave rise to the writing of this paper. The name International Congress arouses the reactions acquired last time, so the situation develops and suggests subordinate purposes, the voyage, arranging one's work. The more one works at it, "thinks," the more hold it gets, the more of potentiality is aroused, until the activity carries the day and one arrives!

Note how this view helps us to understand motives. If I ask what motives determined my coming here I should reply : all the different tendencies-towards this particular kind of action which were set in motion by the original stimulus. The tendency, or the " desire " to accept an invitation, to visit foreign countries, to see the United States, to attend a congress, to hear about psychology, to get a hearing for what I had to say—on the other side were tendencies to spend my spare time with my friends, to avoid undue expense. At first there is conflict, if I do this I find I cannot do that, then there is a gradual co-ordination and complication as the new situation has to be faced in detail. Besides these tendencies to act there is the describing of them in words to oneself and to one's friends. Here again my tendency is determined by my habitual attitude towards myself and my actions. If these are habitually *recognized* as a distinctive element in the situation my motives will be less " unconscious " than if myself and my actions are not so recognized. Supposing one has not acquired the habit of surveying and analysing one's own purposes they may be as " unconscious " as one's peculiarities of speech and accent often are.

There can be no doubt, if we take the view I have suggested, that thought is always, literally, activity. Thoughts are said to " pass through our minds," but what is the actual process? The face of a friend occurs to me, or perhaps his voice (note here how yet another term may be used, " memory "). What is the reaction involved? Clearly some response in the centres involved in seeing or hearing. I try to remember his name and cannot, but very often it " comes back " some hours later when the reaction set going has reached its fulfilment.

" Thinking out " a plan of action clearly consists in the reawakening of this and that tendency acquired in previous experience. If the situation is an unfamiliar one the plan will be relatively vague and sketchy, as for instance in preparing to teach an unknown class.

Finally, what is the bearing of all this on the educator's job? It is surely this, that the individual, the " educand," must be given every chance of *finding himself*. This means that the " situation " in which he is placed must be such, at each stage, as to demand from him the maximum of co-ordination of which he is capable. So he will find more and more purpose and meaning in life as he himself becomes more adequate to its demands.

From all this it becomes clear that education must take place through experience, i.e., through the acquiring of appropriate

modes of reaction so as to be prepared for as many situations as possible.

Of all our modern educational establishments which best fulfils this function? Where do we find the pupil facing situations that demand the whole of his energy and triumphantly solving them with a resultant advance towards a better co-ordinated self, or in other words, advance in self-control? Where so well as in a Montessori school?

Much of our ordinary school work is designed to enable a pupil to adapt himself successfully to one kind of situation, viz., that presented by the examination room. Small wonder if he fails to distinguish between statement and fact, between names and things, between "knowledge" and "opinion". His experience is largely of book-learning, his contact with reality slight.

Compare with him the mill-hand or miner who takes to book-learning in his leisure moments and is all day immersed in experience of things—the raw experience of the mine or the factory. Which has more chance of getting the maximum demand made on his powers of co-ordination?

The former is like one of the prisoners in Plato's underground cave, who has learnt to recognize the shadows of the objects passing behind him, as they are thrown on the wall by the flickering firelight. He is, perforce, unable to grasp the situation as a whole (the real world of daylight) because of the limitation of his experience to the shadows of the cave. The other is already stumbling about in the daylight-world but needing a helping hand to set him on the road towards the heights where he may at last attain "the vision of all time and all existence." For him too the use of words must be the comprehensive or summing-up reaction by which the situation becomes finally his own, but the realities that words "call-up" for each must always be the tendencies—the reaction patterns—wrought in him by past experience. So, e.g., the word "capital" will "mean" to one man the means of wider life, and to another the harsh oppression of the profiteer.

How far can education help each man to speak the same language as his fellows? Only so far as it can enable him to share the same experiences. This is surely why the war brought about a new social understanding, and why the Assembly of the League of Nations is promoting a new kind of international sympathy. This also explains why an educational system organized in accordance with class-distinctions cannot fail to promote class-consciousness,

and why people bred up in the praise and practice of military prowess must not be expected to be pacifist in their tendencies.

Writers of school books on history and even teachers themselves are sometimes singularly blind to the attitude they are fostering in their readers or their pupils, and to the conflict of motives they may be arousing in them. They may, in fact, unwittingly fix the prisoner more firmly in his cave instead of loosening his chains and dragging him out !

Every new situation comprehended, every achievement or acquirement of skill, is a way in which the pupil finds himself, a new mode of thought, a new meaning of life, a new outlet to the light. So, gradually, shadow and substance will be discriminated and values will emerge. The educator's business is to give scope, to direct activity, not to present needless obstacles, but by showing the way to the light to give the hope and confidence that belong to concentrated and competent effort. As new meaning emerges the direction of energy becomes surer, the self more stable and harmonious.

Intelligence Levels in Schools of the South-west.

BY RAYMOND B. CATTELL.

I.—INTRODUCTION.

The last decade has seen the beginnings of an attempt to map out the geographical distribution of native intelligence in this country and has also witnessed an accumulation of measurements establishing the standards of inborn ability which normally obtain in the different types of school. There have been systematic surveys in London, Northumberland, East Anglia, and the Isle of Wight, whilst less extensive sampling has taken place in a number of scattered areas. Valuable information about the relative numbers of bright and dull children in rural as compared with city schools has come to light as a result of the enquiries of Marsden, Gray, Thomson, Duff, and J. B. Russell.

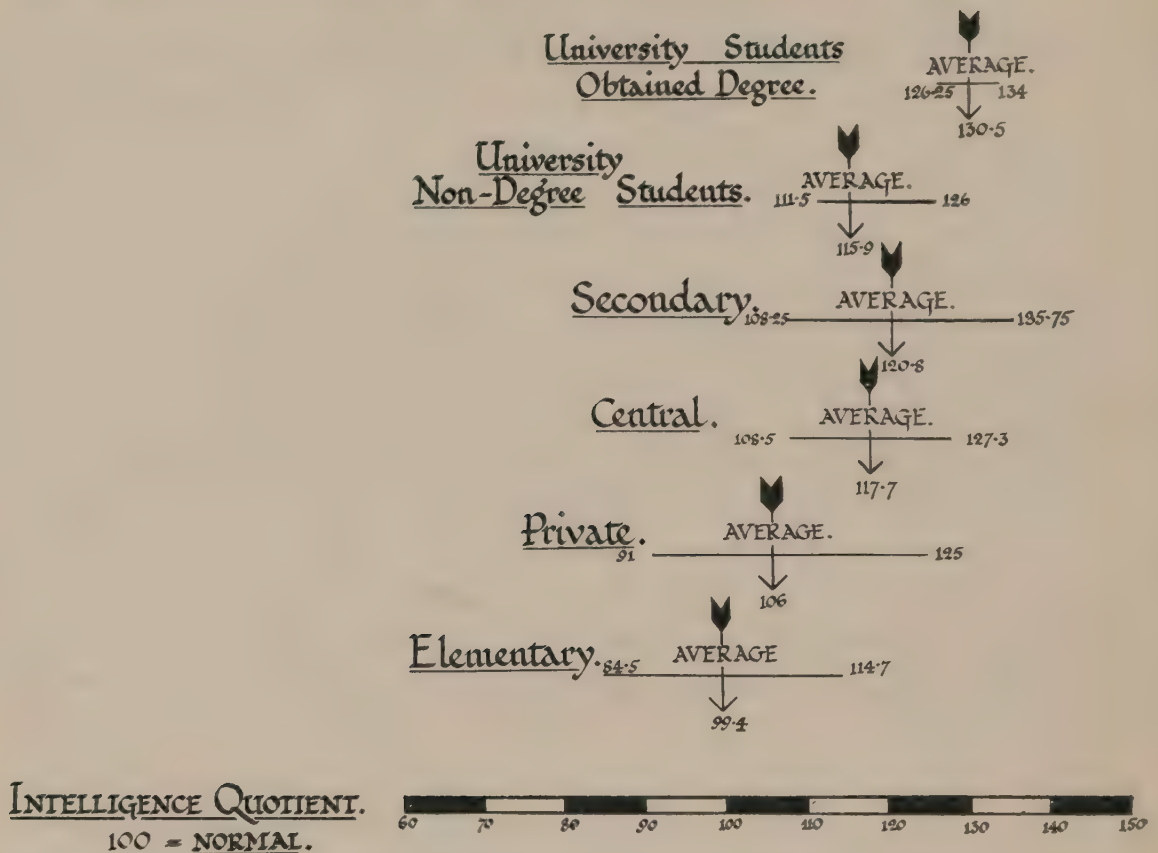
In its geographical and social aspects such work will open new vistas to the anthropologist, but all aspects are important to the educational administrator who needs to know how the talent in his area is distributed among the various districts and in the various types of school.

II.—THE MEASUREMENTS.

Our contribution arises from an intelligence test survey carried out by the Education Department of Exeter University College in the territory from which it draws its students. One objective was the comparison of rural schools in Devon and Cornwall with the city schools of that area, in Plymouth, Torquay, and Exeter. The other was the determination of the general level of intelligence in elementary, private, central, and secondary schools and among college students. Only bare measures of averages and dispersion were aimed at; there was no attempt to prosecute a detailed analysis of results in the manner found in those more extensive researches already mentioned.

Although the rural schools were selected according to no pre-conceived plan, most of them fall, as a glance at the map will show, in the plain of Devon of which Exeter is the natural centre. In these schools all the children in attendance were usually tested, but in the city schools, since several large schools in each city had to be sampled, one or two classes only were taken from the middle or from the top and bottom of the school. The instrument used was

INTELLIGENCE RELATED TO TYPE OF SCHOOL.



RESULTS.

ELEMENTARY SCHOOL.

RESULTS BASED ON 1,264 CASES FROM THE FOLLOWING SCHOOLS:

Heavitree Boys' School, Exeter.
Newton St. Cyres.
Treville Street Senior, Plymouth.
St. John's Hospital School, Exeter.
Roskear Boys' School, Camborne.
Upton School, Torquay.
Lustleigh School.
Ford Girls' School, Plymouth.
Ford Boys' School, Plymouth.
St. Sidwell's Boys' School, Exeter.
St. Sidwell's Girls' School, Exeter.
Creech St. Michael School.
John Stocker Boys' School, Exeter.
Buckfastleigh School.
Crediton Boys' School.
Central School (Girls'), Exeter.
Camel's Head Boys' School, Plymouth.
Camel's Head Girls' School, Plymouth.
Castle Green Boys' School, Bristol.
Babbacombe School, Torquay.
Charles Senior School, Plymouth.
Paradise Road School, Plymouth.

PRIVATE SCHOOL.

RESULTS BASED ON 74 CASES FROM THREE PRIVATE SCHOOLS IN SOUTH DEVON.

CENTRAL SCHOOL.

RESULTS BASED ON 40 CASES FROM PLYMOUTH AND ELSEWHERE.

SECONDARY SCHOOL.

RESULTS BASED ON 250 CASES FROM THE FOLLOWING SCHOOLS:

Torquay Grammar School.
Plymouth Corporation Grammar School.
Sutton Secondary School, Plymouth.
King's School, Ottery St. Mary (Preparatory Dept.)
The Episcopal Modern School, Exeter.

UNIVERSITY.

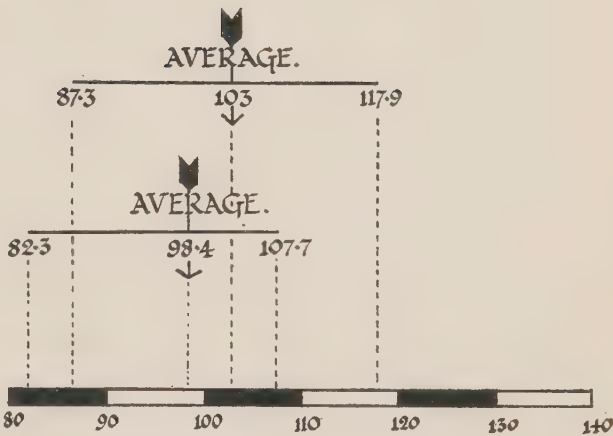
RESULTS BASED ON MEASUREMENTS ON 89 TWO-YEAR STUDENTS AND 24 POST-GRADUATE STUDENTS IN THE EDUCATION DEPARTMENT.

INTELLIGENCE RELATED TO
SCHOOL DISTRICT.

{ELEMENTARY} SCHOOLS
IN RURAL DISTRICTS.

CITY {ELEMENTARY}
SCHOOLS.

INTELLIGENCE QUOTIENT.
100 = NORMAL.



RURAL DISTRICTS.

RESULTS BASED ON 284 CASES FROM THE FOLLOWING
DISTRICTS :

Newton St. Cyres.
Buckfastleigh.
Camborne.
Lustleigh.
Creech St. Michael.
Crediton.
Starcross.
Gunnislake.

CITY SCHOOLS.

RESULTS BASED ON 980 CASES FROM ELEMENTARY
SCHOOLS IN EXETER, TORQUAY, PLYMOUTH, AND
BRISTOL.

the Cattell Group Intelligence Test, of which Scale I was employed in dealing with children aged eight to eleven, Scale II with older children, and Scale III for the oldest pupils and for the university students.* The resulting Intelligence Quotients were then averaged on the one hand for each type of educational institution and on the other for the rural and city areas (elementary schools only).

Two diagrams have been constructed from the ensuing results, indicating the average in each case by an arrow and the extent of the scatter by a horizontal line which covers the inter-quartile range, i.e., begins at the value for the lowest quartile and extends to that of the uppermost. Particulars as to the numbers of pupils contributing to each average and of the schools and districts included in each class are set out below the diagrams.

III.—INDICATIONS.

(1) In this area the Intelligence Quotients in rural elementary schools are significantly greater than in the city schools. From the fact that the city school results show a distinctly skewed distribution, with the median toward the upper limit, whereas the rural measurements show a practically normal distribution, we are led to believe that the inferiority of the town schools is simply a result of their having lost the most able section of their pupils to secondary schools.

(2) The general intelligence level rises in passing from elementary schools, through private and central schools, to secondary schools. Private schools show the biggest scatter, with a skew distribution which indicates that the bulk of the pupils are on the lower side of the average, counterbalanced by a smaller number of pupils of really high ability. The next greatest degree of dispersion is found in elementary schools.

(3) If the average for the city elementary schools is compounded with that of the secondary schools, weighting the former six times as much as the latter on the assumption that there are six times as many children in elementary as in secondary schools (the disparity is probably rather less than that in this area), we obtain an average I.Q. for the area of 101.6. This may indicate that the average

*These scales, consisting of Synonym, Classification, Opposites, Analogies, Completion and Inference tests in which there is a choice from given alternatives and a time limit, are based on Professor Spearman's conception of intelligence. They are published by Messrs. Harrap and Co., and have been provisionally standardized on 2,800 cases.

intelligence here is slightly higher than for the rest of the country, but since the test has not yet been standardized on a sufficiently wide scale and since the sampling only extends to a little over one thousand five hundred measurements it would be unwise to consider this as more than an indication.

(4) Among the students of the university college the four-year students, tested in the post-graduation year, evidence an average intelligence far above that of the two-year students (many of whom entered college under the special conditions created by the demand foreshadowed in the raising of the school-leaving age) whose average is actually slightly lower than that of secondary school pupils. It may be of some significance that the distribution curve of the two-year students' scores is distinctly skewed so that although there are some very high intelligence quotients among them the concentration at the lower level pulls down the average considerably.

The writer would like to express his appreciation of the assistance of the education department, the head masters, and, of course, the pupils, whose eager interest was a pre-requisite for sound testing.

An Investigation of Some New Tests of Non-Intelligence Qualities.

BY DAVID W. OATES.

IN a previous investigation* the present writer has endeavoured to assess the relative effect of intelligence and certain non-intelligence factors in determining school success. The four traits then under consideration were assessed by the judgments of fourteen experienced teachers : the present investigation is an attempt to apply objective tests for the four non-intelligence qualities then studied and to determine if these tests are valid and reliable measures of the particular traits in question. The following is a brief summary of the work and the results obtained.

THE TESTS.

The subjects were nine groups of boys from 11 to 18 years of age attending a secondary school, making a total of 277 subjects. The tests used were based upon the Downey Tests and the Non-Verbal Tests devised by Uhrbrock and Downey, to which readers are referred for details.†

The tests selected were :

- (1) Speed of Decision.
- (2) Ability to Speed.
- (3) Ability to Hold Back.
- (4) Persistence.
- (5) Drive or Impulsion.

In addition to the results of these tests the following data were obtained :

- (a) The scores made by the 277 subjects on a series of Intelligence Tests, which need not be described in detail, were used as a measure of Intelligence.
- (b) The marks obtained in school terminal examinations were tabulated and used as a measure of scholastic achievement.
- (c) Ratings on four Non-Intelligence qualities :
 - (1) Speed.
 - (2) Control of Attention.
 - (3) Drive or Impulsion.
 - (4) Persistence.

*"The Relation of Temperament and Intelligence to Scholastic Ability," *FORUM OF EDUCATION*, VII, No. 3, pp. 171-185.

†"The Will-Temperament and its Testing" and "Manual of Instructions Will-Temperament Tests," June E. Downey. "A Non-Verbal Will-Temperament Test," R. S. Uhrbrock and June E. Downey, *Jnl. of Applied Psychol.*, XX, 2, 1927, pp. 95-105.

These ratings were systematically prepared by fourteen masters on the staff of a secondary school who had intimate knowledge of the boys. At least two masters prepared independent estimates for each boy: the method followed and the examination of the results obtained have been described elsewhere.*

RESULTS.

Whatever the tests used are measuring, the qualities appear to be more or less fundamental, and the results of the tests are relatively constant, for when the tests were repeated coefficients of correlation between the results of two applications of the tests varying from .5 to .7 were obtained.† The range of scores indicated that the tests appear to possess a satisfactory degree of discrimination over the whole of the age groups, and the scores gave a suitable scatter of values and were sufficiently close to the normal to be satisfactory.

(1) *Relationship to Age.*—The abilities measured by some of the tests do not develop uniformly from age to age as intelligence appears to do.‡ The assumption that the limitations of the tests and the nature of the scoring prevent the increase from year to year from revealing itself in the scores does not appear to be warranted; it is more probable that the tests are measuring particular abilities which are already developed to maturity. The coefficients of correlation with age obtained are A. to H. B. § .015, A. to S. -.613, D. or I. low negative. P. has a low positive correlation with age, and S. of D. has a higher positive coefficient. This last fact is what we should expect from the nature of the test.

(2) *Correlation with Intelligence.*—All the coefficients in the different groups are low, only 6 out of 45 exceeding ± 3 P.E. The coefficients for the whole of the 277 subjects in each test were S. of D. .066, A. to S. .087, A. to H. B. .102, P. .135, D. or I. .022. These are in close agreement with results obtained by Uhrbrock and Downey|| and with the latter's report that "the tests gave low correlations with intelligence."** The coefficient for Persistence is too low to indicate any true relationship and is probably due to the

*FORUM OF EDUCATION, VII, 3, pp. 172-175.

†Cf. Uhrbrock and Downey, loc. cit., p. 102.

‡Cf. F. M. Earle and M. Milner. "The use of Performance Tests." Industrial Fatigue Research Board Report, No. 53, p. 66.

§Initials are used throughout to indicate the different tests.

||*Jnl. of Applied Psychol.*, XI, 2. April, 1927. p. 104.

***Jnl. Educational Psychol.*, XVIII, 1927. p. 597.

similarity of the test situation rather than to any intrinsic relationship between the quality tapped by this particular test and intelligence.

(3) *Correlation with Scholastic Ability*.—The coefficients here are a little higher, 10 out of 45 exceed ± 3 P.E. The coefficients for the whole of the subjects were S. of D. .056, A. to S. .051, A. to H.B. -.084, P. .056, D. or I. -.168. The qualities measured by the tests have little in common with the qualities involved in school achievement. In the case of D. or I. 7 out of 9 coefficients in the different groups are negative and the coefficient for the whole of the subjects is -.168, which suggest that the quality measured by this test may hinder effective work in school examinations.

(4) *Correlation with Ratings*.—The coefficients of reliability of the independent estimates prepared by the judges ranged from .450 to .597 and are sufficiently high to warrant our regarding them as an adequate criterion. The 45 coefficients in the full table are surprisingly low and appear to indicate little agreement between the two forms of measurement. The coefficients for the whole of the subjects are P. (test and estimates) .021, D. or I. (test and estimates) -.072, Speed and A. to S. -.098, Speed and S. of D. .107, Control of Attention and A. to H.B. -.203. The only test for which we have comparative data is the S. of D., for which coefficients of correlation between test scores and ratings of .19 and -.05 were obtained by Meir* and Herskowitz† respectively. It is perhaps not unexpected that the A. to H.B. test is apparently not measuring what the teachers understand as Control of Attention, and the results here are consistent, 7 out of 9 coefficients in the different groups being negative and the remaining two negligibly low positive coefficients. It might be concluded that either the tests are not valid or that the ratings are unreliable. Examination shows, however, that the tests are apparently valid measures of whatever they are measuring and the ratings are up to the usual standard of reliability. It seems apparent, therefore, that even if allowance were made for any weakness in the tests or estimates the correlations would still be low, and we must, therefore, conclude that the tests are not measuring the qualities as understood by the teachers making the estimates.

*N. C. Meir. "A Study of the Downey Test by the Method of Estimates." *Jnl. of Educational Psychol.*, XIV, 1923, pp. 385-395.

†M. J. Herskowitz. "A Test of the Downey Will-Temperament Test." *Jnl. Applied Psychol.*, VIII, 1924, pp. 75-88.

ANALYSIS OF THE TESTS.

The inter-correlations between the different tests have been calculated for the nine school groups, but the whole table of ninety coefficients need not be quoted. There is consistence in the evidence throughout the groups that A. to S. is negatively correlated with A. to H.B. and that P. is negatively correlated with D. With a little less definiteness the coefficients in this table also appear to indicate that A. to H.B. is negatively correlated with D. The average coefficients of inter-correlation for all the subjects for the five tests are given in the following table and will indicate in a more convenient form the apparent relationship between these tests.

| | 1 | 2 | 3 | 4 | 5 |
|--------------------------------|------|-------|-------|-------|-------|
| (1) Speed of Decision | — | .010 | .054 | .001 | .032 |
| (2) Ability to Speed | .010 | — | -.187 | .027 | .024 |
| (3) Ability to Hold Back | .054 | -.187 | — | -.076 | -.058 |
| (4) Persistence | .001 | .027 | -.076 | — | -.121 |
| (5) Drive or Impulsion | .032 | .024 | -.058 | -.121 | — |

There is no definite evidence of a general factor, the tests apparently being largely dependent upon a number of psychical elements or factors which function in almost entire independence of one another. It is difficult at this stage to speak with any definiteness of the factors the tests are, or may be, measuring. Richardson, taking the total score of nine Will-Temperament Tests, similar to some used here, concludes that it measures a definite factor or factors, and that "this factor is certainly not cognitive. It is probably conative."* Unfortunately, however, he does not analyse the individual tests and the test activities called into play in them and thus develop a proof that they are all measuring some conative factor.

The test of A. to S. is so simple on the cognitive side that it becomes practically a mechanical test of motor reaction, and, therefore, demands little conation for its successful performance. When worked in the speeded form, in view of the small amount of conation involved in performing the test at ordinary speed, a large increase of conation is possible when it is required to produce an increase in the rate of performance (for proof see Wild).† The

*C. A. Richardson. "The measurement of conative factors in children and their influence." *B. Jnl. Psychol.*, XIX, 4, April, 1929, p. 412.

†E. H. Wild. "Influence of Conation on Cognition." *B. Jnl. Psychol.*, XVIII, January, 1928, p. 342.

same applies to the test of A. to H.B. except that in the one case conation is directed to increasing the speed of working, and in the other case to the inhibition of a tendency to speed. If, however, these tests were purely tests of conation we should expect a greater degree of agreement in the scores and some indication of positive correlation between them. Actually these two tests have the highest negative correlation in our table. There appear to be, therefore, other factors operating in these tests than can be accounted for simply by attributing the results to conation alone. It seems probable, for instance, that the test of A. to H.B. may favour the perseverator in whom speed is slowed down, and similarly, in the A. to S. test the perseverator would be at a disadvantage: this will provide a possible explanation of the negative correlation in our data. Again, the tests of S. of D. and P. may be tapping a perseverative tendency, or measuring habitual slowness. These tests may, therefore, be measuring some aspects of perseveration or some form of inertia in nervous or mental energy.

There may also be a motor factor operating in some of the tests which involve various forms of conscious muscular control, but the coefficients of correlation do not encourage the suggestion, but rather indicate that the abilities involved are specific to each test, and that the five tests are measures of certain reactions specific to the circumstances of each test. Tentatively, it is suggested that in some of the tests a conative disposition is stimulated liberating the impulsive energy of some instinctive process resulting, as in the A. to S. test, in the facilitation of the efferent and motor side of the reaction process, while on the other hand, the stimulation of another instinctive tendency blocks the discharge of the impulsive energy, thus inhibiting the speed of reaction as in the A. to H.B. test. The relatively high negative correlation between these two tests encourages this view, which is also in line with the group factors in temperament qualities, constituting the repressed and unrepressed types, the existence of which the writer has elsewhere* endeavoured to prove. Interesting as these tests are to the research worker, in their present undeveloped stage they are of little practical value to education.

*"Group Factors in Temperament Qualities." *B. Jnl. of Psychol.*, XX, 2, pp. 118-136.

Cross-roads in the Mind of Man : A Study of Differentiable Mental Abilities.

By Truman L. Kelley, Professor of Education and Psychology, Stanford University. Stan. Univ. Press, 1928. English Edition, Mr. Humphrey Milford, Oxford Univ. Press, 1929, 18s., pp. 238.

PROFESSOR KELLEY is well known both in this country and his own as an able statistician and an ingenious experimenter. His share in the production of the Stanford Achievement Tests was an important one. His text book on Statistical Method was encyclopaedic and is indispensable. His mathematical guidance and advice are apparent in many articles in American psychological journals. He has been known to be working for several years on problems similar to those which have occupied the attention of Professor Spearman and his school in this country: and the culmination of these studies is the present book, which immediately challenges comparison with "The Abilities of Man" and is of comparable importance.

Cross-roads falls into two parts. In the first, a theory and technique are developed for analysing into their underlying traits the activities measured by various tests; and in the second this technique, together with a certain amount of what another reviewer has called guess-work, is employed to make such an analysis of a dozen or so tests (from Reading-speed through Memory for Meaningless Symbols to a test of interest in Physical Activity), applied to a carefully chosen seventh grade population of 140 children scattered with a standard deviation of 1.048 years around a mean of 12.94 years. There are also experiments on Third Grade and Kindergarten children less fully reported.

The problem, it will be seen, is the same as that tackled by Spearman. The solution of the latter is based upon the examination of the tetrad differences of the correlation-coefficients, which he finds to be grouped around zero in a manner consistent with the hypothesis that the underlying traits are, one specific trait for each test, usable only in that test, and a general factor usable in all. The few departures from this simplicity are in Spearman's theory (the Theory of *Two* Factors) unimportant, though his disciples have shown a strong tendency to introduce wide-reaching and important group-factors as well.

Kelley on the other hand finds no undoubted general factor (see later), but instead a number of group factors, which he calls in the present instance the verbal factor, the number factor, memory, power of manipulating spatial relationships, speed, and vivacity.

It is necessary to qualify at once the above statement (made to emphasize the different positions of Spearman and Kelley), that the latter finds no general factor. He *has* a general factor alpha running through all his tests. But he calls it "maturity and heterogeneity," and one gathers that he thinks it an appearance only, not a reality. On page 10 he says that "general ability" is probably in the main maturity, the "thing called g" in a number of investigations probably not the same throughout. On page 14 he asserts that all his data and even Spearman's data show the need for more than a single factor. There *may*, he thinks (page 18), be a residual g in Spearman's sense in his data, but (page 19) "it is truly an open question whether any g factor at all would exist if these things (sex, race, nurture, heterogeneity, maturity), had been properly taken into account." On pages 22-3 he emphasizes, on the other hand, the harmony between his results and Spearman's, including "even a general factor, though this last is differently interpreted."

Since the interest in Kelley's book, in Britain, must largely depend upon a comparison between it and Spearman's, perhaps other paragraphs are worth quoting. Kelley alleges that Spearman has taken an unfairly impregnable position, that he has said, in fact, "heads I win, tails you lose." Professor Spearman's "general factor theory" (page 37) "is that any intellectual activity may be thought of as due to a single factor underlying this and all other intellectual activities plus a factor specific to the trait in question and *not found in any other but closely allied traits*. If Spearman had omitted the idea represented by italics, leaving the interpretation in fact erroneously attached by the present writer (Kelley) and certain others to Spearman's early wording of the theory, the proof of the inadequacy of the theory . . . would have been . . . quite simple. Including the part italicized the theory is quite impregnable, because just as soon as certain tests do not give correlations which can be adequately explained by a single factor plus specific factors, then it may be said that some of the tests are measures of "closely allied traits." Dr. Kelley therefore does not set himself the task of proving or disproving Spearman's general-factor theory.

Kelley's belief that Spearman has not worked with large enough populations is frequently mentioned (e.g., page 191).^{*} Above all, Kelley's criticism that (page 17) "Spearman's groups typically

^{*}But I think the pot should not call the kettle black.

have not been children of the same age, and he has not resorted to a partial correlation technique to reduce his data to a constant age basis," appears to the present reviewer as important. For it will be remembered that in the physical data of Gates, used by Spearman in his British Association address (and see "The Abilities of Man," pages 142-4), Gates *did* use the partial correlations for constant age, and his data do not fit into Spearman's scheme (see my footnote, page 251 *Brit. J. Psychol.*, Jan., 1927). My own explanation of the difference, it is true, still appears to me more likely, namely, that mental traits are much more complex than physical (loc. cit. 254).

One of Spearman's disciples, Professor Holzinger, has in the *Journal of Educational Psychology* for February, 1929, written on Kelley's book, and has, using eight of Kelley's tests from page 100 of "Cross-roads," calculated the 210 tetrad differences and set up an alternative analysis to Kelley's, using Spearman's methods. Holzinger employs a general factor which runs through all the tests, three "general" (sic) factors which don't but only run through two each, and specific factors, and obtains a good fit; though why such an analysis should still come under a "Theory of Two Factors" is more than I can tell, since six of the eight tests in Holzinger's version have more than two, and two of them actually have four factors each.

The longest and most able review of "Cross-roads" which has appeared is that by E. B. Wilson in the *Journ. General Psychol.* for January, 1929: from which in the first place I would like to quote these words: "The author (i.e., Kelley) makes it clear that his general factors or traits are group phenomena. He does not go on any more than did Spearman to assign to each individual in the group examined his appropriate rating on each general and specific factor." Now of Kelley this is true. For example, he says (page 37) "this proportion will presumably not hold for any particular individual whose score might be under consideration," nor does he anywhere make calculations about an individual. But in saying the same of Spearman, Wilson was clearly in error. In the appendix to "The Abilities of Man," pages xvii and xviii, paragraphs 4 and 5 are headed respectively "To measure a person's g," and "To measure a person's specific ability," and these two are said to form "the practically all-important problem." On page xx Spearman gives the imaginary scores of an individual and actually calculates his amount of g. His method, it has not perhaps been sufficiently noticed, simply places individuals, as regards any *specific* ability,

in the order of their raw scores in that test, despite the probability that of two men with equal scores one may be making it chiefly by specific, the other by general, ability.

From all such very dangerous attempts Kelley refrains, and (I think with Wilson) refrains wisely, for such individual estimates only possess quite a low probability of being correct. Professor Spearman's answer would probably be that in this world it is necessary to make estimates, even of a low probability, and that we all do so daily. The danger is, however, that his estimates (admittedly good) should through their scientific appearance mislead the public into over-great confidence in them. Estimates of *general* ability on the other hand are much more reliable, even when applied to one individual, and Spearman's method calls upon all the available information, and ranks individuals differently, when all tests are considered, from any ranking given by a single test.

One or two subsidiary but interesting points in Kelley's book may be referred to : (i) He gives on page 93 a new idea for deciding on the best weighting to use for the " number attempted " and the " number correct " in obtaining a total mark from a group test. Weighting the rights and wrongs to give the maximum correlation with a criterion has become a familiar process (see Thurstone, *Psychol. Bull.*, xvi, 235, 1919). The new idea here is to weight them so as to give the maximum reliability, or self-correlation of two successive forms of the same test ; (ii) On pages 43 and 44, referring to the axisymmetrical determinant of the correlations with units along the diagonal

| | | | | |
|---|---|---|---|---|
| l | r | r | r | . |
| r | l | r | r | . |
| r | r | l | r | . |
| r | r | r | l | . |
| . | . | . | . | . |

Kelley says (top line of page 44) " its probable error has not been calculated." This is not (now) true. For this case Stuart C. Dodd gave the solution in *Biometrika* xix, 45, 1927 : and for the more general case where a quantity k replaces the units of the diagonal,

a solution has been given by Dr. T. P. Black (*Proc. Roy. Soc. Edin.*, March, 1929, xlix, (1) No. 6, 72-77).

(iii) Page 58 : "The pentad criterion. . . is a basic criterion in the study of differentiable abilities." Dr. Kelley will be interested to know that Dr. J. R. Thompson, of Sheffield, has for some years been investigating this among other criteria.

(iv) It is an interesting and important feature of Kelley's work that, in his analysis of tests into factors, he rejects combinations of factors which give an unreasonable high reliability to a test. It is true that there is considerable arbitrariness in his decision that the variance of the specific non-chance factors must equal not less than five per cent. of the reliability coefficient: but the idea is sound and I think new.

To return finally from details to the main point, let me again emphasize that we have in Kelley's work another approach to the problem which Spearman has attacked, and with different results. Spearman thinks there is one *g*, with innumerable specifics, and comparatively unimportant group-factors. Kelley thinks that *g* may even perhaps be non-existent, and group-factors may be all-important. I cannot resist the conclusion that both are wrong, or, if you like, both right but incomplete. My own view is that the mind is one extremely complex organism which, at the time when it comes to attempt any of the tests used in the production of these tables of correlations, draws its ability to succeed in any one of them (say x_1), from a multitude of sources, some inherited genes for this or for that, some points of training or of experience during education and during life. The test samples, as it were, this myriad-influenced mind, and tests x_2 , x_3 , and the others draw on more or less different samples. The result of such a theory can be shown to be that, if the mind were complex enough, the correlations would give tetrads grouped about zero in the same way as is required by the Theory of Two Factors (*vide* various articles by the reviewer; and more exactly, and most recently, "Mathematical Consequences of Certain Theories of Mental Ability," by Dr. J. Mackie, *Proc. Roy. Soc. Edin.* 1929, xlix, Part i, No. 2, 16-37). If some of the tests happened from their nature to sample much the same province of this rich complexity called the mind, the correlations resulting would be the same as though I were to postulate general intelligence, specific factors, and a group factor joining this group of tests. Only I prefer not to invent entities called general intelligence, memory, power for this or for that, etc., but to stick to the idea of samples of a complex organic integrity called the mind, or called, if you like, racial plus personal experience

GODFREY THOMSON.

The Child's Conception of Causality.

By **Jean Piaget.** (International Library of Psychology, Philosophy, and Scientific Method. (Kegan Paul. P. 309. 12s. 6d.)

THIS is the fourth volume which Professor Piaget has contributed to the study of child thought. It contains a great deal of valuable evidence as to the actual ideas of the children concerning the forces of nature, the origin of "the wind," the movements of the heavenly bodies and so forth. The stages revealed in the development of such ideas provide a large amount of material which is of interest to all students of child psychology, and particularly to those who are concerned with the instruction of young children in the elementary beginnings of natural sciences. The topics just mentioned and such problems as the mechanism of the bicycle and the working of the steam engine contribute further examples of those general principles of the interpretation of child thought which Piaget has made famous. The results are in line with his previous findings and are analysed with the ability and thoroughness which we have learnt to expect from the distinguished author.

Nearly half the book comprises the final discussion of the child's conception of causality, in the first part of which Piaget gives a reasoned résumé of some of his main ideas contained in the earlier volumes, and an analysis of the various types of ideas as to causality and law. He finds, for example, as many as seventeen different types and stages in the evolution of the idea of physical causation, from mere psychological causality and finalism to that of "atomistic composition" and what he calls "spatial explanation," and finally "explanation by logical deduction." "True causality," he says, "does not appear till about the age of seven to eight." In this, as in other matters, my chief criticisms would be that Piaget puts the date of the first appearances of various elementary processes too late, and that he sometimes tends to fail to give an opportunity for evidence to appear because of the type of material with which he asks the children to deal. Certainly spontaneous enquiries as to physical causation are on record as early as the age of four, as I have observed in the case of my own children, and as may be traced in several reliable reports of observers of young children.

The central chapter of this book is that on the child's idea of force, in which the developments are carefully noted. At the very earliest stage, movement and life seem to be identified and most movements held to be conscious, even those in what we regard as inanimate beings.

Then force is "assimilated to movement," things which move of themselves have force, and later, things which engage in "useful activity."

Then those things which are "strong" are thought to have force, things which resist; and lastly, things are strong in virtue of size and weight.

Piaget agrees with the view that the idea of force "owes its existence to inner experience" (page 126). He argues, quite soundly as it seems to me, against any conscious deliberate generalization from experience of the self as a moving cause, to the force lying within other objects. Some of his wording may suggest to the hurried reader that he regards the idea of force as having nothing to do with conscious experience, but in this connection apparently Piaget means by "conscious experience" what might more exactly be described as reflective, introspective experience. Granting, however, this main point of Piaget that there is no deliberate generalization from self-experience to that of others, I think that here again he does not do justice to some of the early attempts of the child to think things out rationally. On page 129 he makes the interesting generalization that "in the measure that the child is ignorant of the existence of his own thought, he attributes life and consciousness to every object" . . . "and in the measure that he discovers his own thought he withdraws consciousness from things around him." Now I suggest there is a sense in which the child becomes conscious of his own thought at a much earlier age than that at which Piaget seems to regard as the age of the child's first consciousness of its own thought as such. And if so this may affect Piaget's position, as I shall indicate directly.

Nevertheless, I should suppose (as I take it Piaget would) that there is a process of "*empfindung*" (a word Piaget does not use), of reading force into things, occurring in the mind of the child, before he gets to the stage of reflection upon himself as such—of knowing his own "I" as Piaget puts it; though I should be inclined to think that the experiencing of the self as a causative agent may come before such a process of *empfindung*. The ambiguities in the translation* of some of Piaget's sentences makes it uncertain whether he would agree with this; e.g., on page 129 he says, "If force were really in the first instance *experienced in the 'I'* and only subsequently projected into things, then we could speak of induction"

*I regret that I have not available in time for this review the original text of Piaget's book, especially as I detected one or two serious errors in the translation of one of his earlier books.

(and he will not) ; “ but if it is in the things around him and *before knowing his own ‘ I ’* that the child discovers force,” etc. Here Piaget seems to use the phrases “experienced in the ‘ I ’” and “ knowing his own ‘ I ’ ” as indicating similar types of experience ; I take it he means in both cases to refer to the self-conscious, introspective awareness of self and its experience, though for most psychologists I presume the two phrases would mean different things.

Further even the self-consciousness, the isolation of the self in thought, begins early enough to be the possible basis of that transference from self which Piaget finds unlikely. The reference to the self by name occurs before the end of the second year ; the use of “ I ” by about that time ; the sensible use of “ self ” may occur about the same time (e.g., “ B. did self ” by my boy B. at 2 : 4). By three we get frequent contrasting of the self with others, e.g., “ *I’m a good girl* ”—when another child is scolded. So that before the lowest age at which Piaget applied tests as to the origin of the idea of force, there may be present that element of self-consciousness which he admits would provide the basis of transference or “ induction ” of the idea of force from the self to other objects.

In an earlier book Piaget has contended, and on the whole rightly, as it seems to me, that even if the first occurrences of various types of thought processes are found to occur earlier than he states, yet the importance of the qualitative distinctions and the graded steps, which he has demonstrated, remains. We have above, however, an indication of how important it may be not to place the occurrence of a given thought process at too late an age ; otherwise we may, as I have suggested, be misled in the interpretation of thought at a later stage.

In my review in this journal of Piaget’s “ Judgment and Reasoning in the Child,” I suggested that objective reality may stimulate in the child’s mind the thought of the possibility of facts being in conflict with his own desires, at least as early as personal intercourse stimulates that idea. This same under-estimation of the influence of objective reality may account for Piaget’s late placing of the first dawn of consciousness of self, as well as of the first checking of purely egocentric thought.

As this book is apparently the last of the series by Piaget on the structure of the child’s thought and the development of his ideas about the material world (though all his readers will be glad to hear of further promised studies on the moral ideas of children), I should like to close with a reiterated appreciation of the great value of Piaget’s contribution to our knowledge of the stages of develop-

ment of children's ideas. My criticisms throughout have been largely to the effect that the very beginnings of the various types of thought process occur earlier than Piaget allows ; and if those criticisms are valid they indicate the necessity of the study of the earliest years of life as a supplement to, and basis for, the kind of work which Piaget is doing. It may be that a child of five or six, or seven, when asked " What do you think with ? " cannot do better than reply " With my mouth " or other words that suggest an identification of thought and speech (what better do the Behaviourists ?) ; but the spontaneous question to a *silent* adult " What you thinking about, daddy ? " asked by a child just four years old, and the spontaneous remark on another occasion, made by a child of two and a half after he had been quite silent for a time, ' B think 'bout steamer '—these show that an even younger child need not really *identify* thought and speech, and must not be supposed to identify them merely because she cannot give a good answer to a difficult psychological (or physiological) question like " What do you think with ? " The child just referred to, by the way, in answer to that same question, " What do you think with ? " replied " a toy," no doubt confusing in this context " with " and " about "—another example of the way in which formal tests and questions put for a definite purpose may be inadequate as a guide to the thought capacity of the child at the given stage, without the counterbalancing observations on the child in the midst of its own every-day activities. Nevertheless, these very studies of still earlier childhood will gain and have gained already a great stimulus from the publication of Piaget's four important volumes.

C. W. VALENTINE.

Book Reviews.

Le Catholicisme ; ses Pédagogues, sa Pédagogie : par Fr. de Hovre.
Traduit d'après l'édition flamande par G. Siméons. (Bruxelles, 1930.
Librairie Albert Dewit. Pp. viii + 454.)

This is the second of three volumes, the first of which appeared in 1927 under the title "Essai de Philosophie Pédagogique."* The third volume, which will be in a sense a continuation of the "Essai" in so far as, like the latter, it will expound and criticize some modern conceptions of life with their corresponding theories of education, is promised by the author but has not yet appeared.

The "Essai" developed out of the author's critical examination of contemporary educational systems ; its object was to show that education rests not only upon psychology, but upon the whole of philosophy. The criticism in it was made from the standpoint of Catholicism, and it is the principles and educational theory of Catholicism that are developed in the present volume, which is therefore the complement of the "Essai."

The first of the four parts of the work, which deals with the organic bond between philosophy and education, is essentially a short recapitulation of the main theme of the "Essai," that every theory of education is based on a philosophy of life. The conception of education as simply adaptation to child nature is shown to be limited and unsatisfactory and to need supplementing by the idea of adaptation to culture and civilization. Methodology is regarded as a secondary consideration compared with the aims of education and the personality of the teacher.

Part II is an exposition of the main principles of the Catholic philosophy of life as the background of the Catholic theory of education. This philosophy is said to do full justice both to real life and to the real man and to be a consistent, in fact the only consistent, conception of life.

The third and by far the largest part of the work describes five typical representatives of contemporary Catholic education : Spalding in America, Dupanloup in France, Cardinal Newman in England, Cardinal Mercier in Belgium, and Willmann in Germany.

Spalding is shown as a penetrating observer of American life and an enlightened and far-seeing worker in the education of the American people to Catholicism, which was his aim in life. His practical knowledge of human psychology was profound ; holding that "character is formed by what moves the imagination and the heart rather than by what interests the intelligence," he insisted on the importance of personality for the inculcation of ideals, and believed that he could best accomplish his own task by impressing some leading ideas on the American mind. He saw clearly that education is the interaction of community (society, state, church, family) and individual, and that to ensure progress "it is not so much the social conditions of our life that ought to be modified as we who ought to be reformed." Believing that little progress can be hoped for, especially in religious life, if women are left uneducated, he fought and helped to destroy the existing prejudices against their higher education. A place is claimed for him among the great classics of Catholic education because of the stimulus and inspiration he gave to teachers and educators.

The treatment of Dupanloup, though short, is most interesting because into the foreground is brought his opposition to two contemporary events, the founding of a state university by Napoleon I and Rousseau's educational

* Reviewed in THE FORUM, February, 1928, pp. 84-87.

theory. Dupanloup's cogent objections to the state university are well worth reading to-day and his criticism of Rousseau's ideas is penetrating and sound. Moreover, his ideas on boarding-school education are represented as the model upon which Catholic institutions have been organized. His knowledge of the psychology of the child and of the adolescent is praised as just and profound; this is certainly true of many of his quoted remarks, and especially of his views on emulation as a motive in education (pages 142-3), but it is surprising to read that "children are naturally bad." He has a proper appreciation of the right relationship between school and family and of the place of authority and respect in education.

More space (well over 100 pages) is devoted to Newman than to any of the other representatives of Catholic education; a man of his worth is considered of more importance for Catholic education than all the nineteenth century literature on school method. His devotion to education, in the large sense, and his self-imposed task of reconciling England and Rome, are commented on. His ideas on university education and the development of the philosophical spirit as its essential purpose are expounded clearly and systematically. His apt criticism of the attempt to educate the masses to morality and religion by means of libraries and museums, as illustrated by the experiment of the Tamworth reading-room, is noted, and his conception of the aim of education in terms of the Catholic character, which embraces within it the much more limited ideal of the gentleman, is explained in detail.

Only a few pages are devoted to Cardinal Mercier, who is represented as a learned specialist, a great thinker, a most gifted teacher and a remarkable orator. His life's work is described as the attempt to reconcile the sciences of nature and the sciences of the mind by combining the scholastic intellect and the modern intellect, a combination which would rejuvenate scholastic philosophy by contact with modern thought and science and re-christianize modern science and philosophy by contact with scholastic philosophy. His writings on psychology are said to have influenced all subsequent Catholic activity in that subject.

To Willmann, the representative of Catholic education in Germany, just over 100 pages are devoted. Whereas contemporary German philosophy separated philosophy and theology, Willmann realized clearly both their connection and the distinction between them, the latter being the expression of revealed truths, the former showing the results of the researches of reason. Similarly in education he sees the need for synthesising abstract idealism, which is apt to issue in a flood of literature and bookish theories and a mania for reform, and brute realism, which by itself leads to a soulless technique, to external and uniform organization and a mania for method. He rightly insists that he who is concerned with education ought to know what it means, but in his wisdom remarks that parents (and not parents only, one might add) confuse education with the school. His own definition (page 370) is that "education consists in the provident, formative, and directive action of adults upon the development of the young in order to get them to share in the benefits which are at the basis of social institutions," and he elucidates it by an admirable analysis of the six fundamental concepts—foresight, formation, direction, development, benefits, and social institutions. Such an analysis of the meaning of education, in organic union with deep knowledge of the history of education and intimate acquaintance with the technique and methodology of its practice, is the only sound basis for the true science of education. "Our educational programmes," Willmann says (page 392), "suffer from an accumulation of matter, from lack of structure; the gaps in our higher education proceed . . . from the fact that every specialist loses sight of the interests of his colleagues and of the general aims of the school."

The fourth and last part of the volume (pages 399—end) sets out the main principles of Catholic education. Some of the “idols” of modern education are once more briefly criticized; e.g., admiration for an experimental psychology which is sterile and out of touch with concrete life; over-estimation of methodology at the expense of education conceived as a spiritual atmosphere; the mistake of regarding biology as the true science of man and the foundation of scientific education. By way of contrast some tendencies of modern education which are helping to emphasize the value of Catholic education are described; the revival of Christian philosophy; recognition of the educative influence of the ecclesiastical community; the growing importance of moral education; consideration of man as a person rather than as a thing; the emphasis placed by psycho-analysis on intuition as a source of psychological knowledge and on the influence of the emotional life, and its revelation of the importance of “confession”; Adler’s individual psychology with its appreciation of a practical knowledge of man in opposition to bookish psychology and its recognition of a changed conception of the world and of life as constituting the essence of the medical treatment of neuroses; the growing appreciation of the value of character in practical life and of the value of religion for a knowledge of character; the growing tendency to explain psychical life not by its elements but by its values, especially its moral values. Then there are revealed as dynamic forces in the education of man various elements of Catholicism; such truths as the existence of God and God is love; the ecclesiastical community with its morality and law of life, its liturgy and its sacraments; the Bible as the basis of the religious conception of life and of the universe and also as an inexhaustible mine of wisdom; the divine Personality as the keystone of Catholic education and the supreme educational value and aim. Religion is regarded as something essential to man; consequently his education is conceived as essentially religious, both moral and social education being inseparable from religious education. The socialization of man is important, but the first step in that direction is for man to become good by getting into right relations with God; the culture of personality in this sense is the beginning of all social culture and at the same time prevents man from becoming the slave of the community.

As Professor F. W. Foerster points out in his admirable little introduction, it is difficult for one who is not a Catholic to attempt a critical estimate of the value of this book because inevitably this means touching on controversial matters. One might consider that extravagant claims are made on behalf of Catholicism and Catholic education when, e.g., the former is described as the only, the true religion (page 42) and the only consistent conception of life; and the latter is called (page 399) the prototype for all systems, the quintessence of every true educational thought; but one could not expect the author to agree. Again, one might hold that other religious communities exert an educational influence similar in nature and equal in results to that described as characteristic of the Catholic Church; or again that, in spite of what is said (page 32) about the onesidedness of modern philosophies of life, a certain form of idealism could direct and inspire educational work quite as effectively as Catholicism; but one would scarcely expect the author to agree to these two propositions.

It might be more satisfactory, therefore, to leave the arena of possible religious controversy at any rate and attempt to set down some other reflections which the reading of the book suggests.

In a work of this sort, which expounds the opinions of various persons on the same fundamental problems, a good deal of repetition is inevitable; but interest is here maintained by the freshness of each contribution and by the skill with which it is set out. Some of the opinions expressed seem to echo the thoughts of other educators; but no one will be surprised at that. New-

man's three fundamental religious principles (page 174) seem insufficiently developed to be intelligible without reference by the reader to his "Apologia." Occasional statements are at least questionable, like the reason suggested for the creation of the new universities in the nineteenth century (page 195) and the alleged silence of histories and other works on education concerning Newman (page 198). Occasionally, too, unorthodox psychological views are propounded, such as the natural badness of children (page 131) and the doctrine of "faculties" (page 449).

But there are considerations much more important than these. In the first place, it is rather surprising to find the author throughout expounding, without any criticism at all, the opinions of the chosen educators. Secondly, it is not easy to grasp what idea the book is intended to convey of the relationship between philosophy and religion on the one hand and philosophy and the remaining sciences on the other. Nothing is said of the relationship between philosophy and theology in the account (pages 209-10) of Newman's conception of the place of theology among university studies; but we are told (page 335) that "the philosophical instinct has its source in the mystical element of religion," and in another place (page 38) that philosophy is autonomous, yet bound to God as His servant, while the attitude fostered by the Catholic philosophy of life is described (page 39) as the opposite of the critical spirit. From pages 207 and 307 it appears that philosophy is conceived, as by Külpe and others, as the science which synthesizes the results of the other sciences into a conception of life and of the world, and yet it is denied that philosophy is metaphysics, which is exactly what, I am sure, Külpe would have called this aspect of philosophy. Again, education is defined (page 24) as a moral science, and it appears from other passages and from the diagram on page 438 that education is conceived of largely, if not entirely, in terms of morality and of course of religion. It is probably this emphasis on morality and moral education which has forced æsthetics and æsthetic education into a very subordinate place in the book. Logic, ethics, and the sociological sciences and metaphysics are mentioned as indispensable auxiliary sciences in education (page 289), but there is no mention of æsthetics (*cf.* also page 380), and one might reasonably question the statement (page 442) that "all great art is associated with great personalities . . . who lived for something higher than their art." Lastly, some injustice seems to be done to Fichte in this volume, though much less than in the "Essai." A perfectly sound and very important comment on Fichte's educational theory is quoted (page 304) from Herbart, viz., that two individuals who are autonomous in Fichte's sense cannot have any educational influence upon each other. But it is very misleading to state (page 302) that Fichte "reduced philosophy to a theory of science," because his "Wissenschaftslehre" is really philosophy and not what we should ordinarily call a "theory of science" at all. It is also very misleading to suggest (page 20) that he regarded the functions of a university as "initiation into scientific research," and it is certainly wrong to credit Fichte and Schleiermacher with similar views on the aims of university education. It would be far more true to say that Fichte, like Newman, regarded the cultivation of the philosophic spirit (page 204) as the ideal of university education and the university as the incarnation of philosophy (page 209). Cardinal Mercier's views (page 235) on the place of books and teaching respectively in university education could likewise easily be paralleled from Fichte's writings.

There can be no doubt, however, that the book will be of great value to Catholics as a profound study of the intimate connection between Catholic philosophy and Catholic education; as a systematic exposition of Catholic educational theory together with cogent criticisms of many features of modern education; and as a very full, interesting, and instructive summary of the

work and opinions of five great Catholic educators. Moreover, it deserves, and will amply repay, careful study by all who are concerned with education. It illuminates the theory and practice of education, past and present, by referring them to their underlying conceptions and principles ; it helps us to evaluate them by suggesting certain standards ; it reminds us that the further development of educational theory and practice must be based on true principles and inspired by the highest ideals. It is the declared enemy of one-sided and exclusive conceptions of education and is itself characterized by breadth of view and largeness of vision. It emphasizes especially the supreme value of religious conceptions in energizing, synthesizing, and unifying educational activities by supplying and maintaining worthy ideals. G.H.T.

The Art of Study : by T. H. Pear. (Kegan Paul. Pp. 117. 3s. 6d. net.)

As implied by the title this book is addressed to students in general and not to students of any particular branch of study. The topics discussed are intended to bear on the mastery of any of the arts, sciences, occupations, sports, habits, in fact, all human activities. With so universal an aim, considerable skill in presentation, as well as wide knowledge of psychology, was necessary in order to make the book worth while. Few students would fail to find something in it to their advantage. This is the age of the expert and the specialist. The tutor coaches his star pupil, the oarsman his crew, and the shepherd his prize sheep dog. In every art there are coaches at the top who could give away many valuable secrets if it were worth their while. Professor Pear, of course, would not attempt to usurp their functions. But there are others who might profit from reading this book, e.g., the mentor who deals out the same stuff in the same way to all his students, or lectures his shivering crew in midwinter, or swears at his dog.

Topics such as "How to listen," "How to concentrate," "How to form habits of study," "How we progress in learning," and "Can the memory be trained ?" are treated in the author's racy and sometimes provocative style. The use of analogies adds to the interest even if they occasionally raise queries, e.g., "Now, just as one man's body may make him a good hewer of coal and another's a good surgeon, different minds require different kinds of learning" (page 19). This reads like a support for the naive view which assumes the skill of the surgeon to depend on the hand, or on a delicate co-ordination of hand and eye. Probably most psychologists would point to the cerebrum, and if the surgeon were allowed to discuss his virtues he might claim manual, optical, and cerebral superiority.

Many valuable practical hints are given and each student has to adapt them to his own circumstances, e.g., "If you can afford it, reserve a desk in a corner of the house for study alone. Don't read novels or write sociable letters at it" (page 54). There is undoubtedly a good deal to be said in favour of this place-habit, as there must be a tremendous dissipation of useful energy owing to work being done in unsuitable places. The author might perhaps have added another word of advice to the uni-cornered youth in later years when the habit has become strongly entrenched. What if he has to study away from his corner ? Would it be a case of Sir Walter Scott's button ?

The book may be recommended for at least three reasons : It gives many practical hints to the student. It causes him to think. It may inspire him to express his personality more completely.

Ll.W.J.

The Human Mind : by K. A. Menninger, M.D. (A. A. Knopf, Ltd. 447 pp. 21s.)

It is impossible to give a brief yet adequate review of this interesting volume. The book deserves to be strongly recommended and should find a place on the shelves of every training college library. It is well printed and written in an easy style.

The book may be described as a thoroughly systematized collection of the types of experience and the kinks of character that may arise from the interplay of our heredity and our environment, or that may be embossed on the personalities of our pupils. There is little theory in the book. The author's standpoint allows him to describe behaviourism (page 12) as inadequate, to accept the James-Lange theory as true (page 187), and to make a sane and original interpretation of the Freudian theories (page 267): "He (Freud) referred to sexual interests; that is, interests in other personalities besides the self. In other words, there is no psychological distinction between sexual and social. If Freud had only used the word 'social,' which would have served his purpose just as well, he would have staved off an enormous amount of criticism on the part of people for whom 'sexual' means 'genital.' There are actually thousands of people who literally believe that two-year-old babies contemplate cohabitation. This is no attempt to be facetious."

He stresses the need for both suppression and repression in a civilized society (page 270): "Essentially psycho-analysis is concerned with . . . disguises which cloak the original intentions . . . if they (disguises) serve some external utility they are called *sublimation*, if not they are called *symptoms* if occasional, and *character traits* if persistent." The classified types of faulty adjustment contained in this book should be invaluable to any teacher who, with the author, would rate mental hygiene above physical hygiene. Such habits as brushing the teeth, using the handkerchief, or breathing deeply, may be held to be less valuable than habits of self control, of compensating for personal bias, of facing the facts, or of making decisions promptly.

E.J.G.B.

An Introduction to Child Study: by Ruth Strang, Ph.D. (Macmillan. 550 pp. 12s.)

This is a sane and readable book specially suited to those who expect to find their life work in infant or nursery schools. The arrangement of the subject matter is chronological—the pre-school, the primary school, and the dawning adolescent stages. The psychological aspect of the subject receives most attention, though such subjects as heredity and diet are dealt with. The two short chapters on the learning processes are rather dull, but generally the book deals interestingly with real problems. Thus Chapter XVI gives hints on how to deal with nagging, excessive crying, temper tantrums, ownership, and running away (page 195): "It isn't only parents and teachers that nag. Some pre-school children become adept at nagging their parents for things they want . . . Nagging is discouraged by the parent who remains firm—even when there's company and the child is making himself 'a perfect nuisance.'"

The author's attitude towards slang is reasonable (page 402): "Forceful vivid slang should be retained in the particular situation to which it is appropriate. It is a contribution to our contemporary language. No other words express so tersely the idea of being face to face with an insurmountable difficulty as the phrase 'up against it' . . . The kind of slang which should be prevented from gaining headway in this period is the kind which is ungrammatical, vulgar, or used indiscriminately on all occasions."

The value of this unusually "practical" book is enhanced by the full bibliographies appended to each chapter.

E.J.G.B.

Our Educational Task : by William Heard Kilpatrick. (University of North Carolina Press, Chapel Hill, N.C. Pp. 123. 7s.)

This little book by the Professor of Education at Columbia University is a well-written book dealing with fundamental problems of education and their relation to social and philosophical conceptions. It has special reference to the changing situation in "the south," but it touches on general problems so intimately as to be of wide interest. Local problems are treated in the light of the present world situation, to quote the title of one of the chapters, and the task of education is considered in the light of the final valuation of our civilization.

Education in the Irish Free State: a survey of the report recently published by the Department of Education of the Irish Free State.

The report of the Irish Free State Department of Education for 1928-29 which has been recently published passes rather severe criticism on the methods of teaching used in some parts of the country. Taken as a whole, however, the inspectors' reports are satisfactory.

The enforcement of the School Attendance Act has resulted in a fairly good attendance, 82.6 per cent. compared with 73.5 per cent. in 1926-27, and 82.7 per cent. in 1927-28. During the year twenty-three van and twelve boat services were used for the transport of children. £61,586 had been made available for use in erecting schools, and thirty-three were in the course of construction with accommodation for 3,423 pupils.

Arithmetic in primary schools continued to be rather weak, but the inspectors did not consider the criticism of teachers justified, as now the processes of the subject were being taught right from the beginning, not only for their utilitarian value but as a mental exercise for developing the reasoning power. The time requirements for new subjects such as Irish and Nature Study appeared to have caused greater curtailment of time for arithmetic than any other subject. History in a number of cases was not taught properly, teachers not studying any matter outside the school books and treating the subject too much like a reading lesson. Geography, Nature Study and rural science were well taught, although in some cases teachers did not pay sufficient attention to the aspects of physical geography and others had not freed themselves of the old-fashioned conception that geography was lists of towns and rivers and map-pointing. In schools where Irish was well taught English also appeared to be very good, and on the whole it could be said that the teaching of Irish had led to more skilful teaching of English than hitherto. Oral English was not particularly progressive, as a number of schools still retained the lesson books of thirty years ago. With regard to Irish, which is a compulsory subject, the report says that outside the Gaeltacht (native speaking district) progress in the use of the language is slow, as only about twenty-five per cent. of the teachers were fully qualified to teach the subject, and instruct through the medium of it.

The report suggests that the teachers are in a number of cases the slaves of the text-books that reflect only the lives of townspeople, although common sense should convince them that children living in the country will visualize more readily things that they are acquainted with rather than those outside their experience. The teachers, continues the report, many of whom are elderly, have not received the training best adapted to secure the most effective education in the adolescent stage. The inspectors agree, however, that the teachers are, in the main, doing their utmost to give the higher classes the best education they can impart.

In secondary schools progress was satisfactory, and there was a marked increase in the number of teachers giving instruction through the medium of Irish. The increase in the number of students who took Latin and Greek at their examinations with a large degree of success reflected great credit on

the classical instruction they had received, more especially in Greek. The standard of geography varied but on the whole it was good. In the majority of cases English had been well taught and had reached a high standard. In girls' schools French was a favourite subject and had been soundly taught.

The attendance of students at the Metropolitan School of Art had fallen by twenty-four from the previous year and now stood at 523.

English Education, 1789-1902 : by J. W. Adamson. (Cambridge University Press. Pp. x+519. 21s.)

This is the first really comprehensive work concerning nineteenth century education history that has appeared, and, coming from the hands of Professor J. W. Adamson, it bears the marks of the care he bestows on all his productions. In the space of about five hundred pages he has had to treat a period during which there were many developments. Economic, religious, political, social, and, indeed, personal interests, too, were intermingled during the period to such an extent that it requires a masterly hand as well as a complete knowledge of the facts to keep the issues clear. In the present volume this has been well achieved, and the lines have been kept remarkably clear, notwithstanding all the difficulties. In the nature of the study the reader must expect to find smooth narrative occasionally broken by a rapid review of a period in which many events helped to shape later legislation, etc., although such events do not repay detailed description in a work such as this ; for one example out of several there are the Parliamentary discussions of the mid-century. But for the benefit of the student they must be noticed in passing.

Professor Adamson does not seem to have omitted much, and certainly nothing that has had any formative bearing on educational policy and development, except that some credit is surely due to Thomas Wyse for his contributions to the principle of National Education.

The main book is divided into three parts : Pre-Victorian, Earlier Victorian (1839-1867), and Later Victorian (1867-1902). The periods are well marked. The first leads to the entrance of real State interest in education, the second is closed by the reports of the three Commissions which indicated State concern to get on the right track ; and the third period is that which definitely marks the movement towards a National System.

Professor Adamson has made 1902, with its epoch-making Education Act, the latest boundary of this volume ; so much has happened in the last twenty-eight years that the construction of a fourth part would mean a very special study in itself and result in a work as large as that before us. Sanity in educational movements may be maintained by the help of the historian, and if mistakes are to be avoided in the future, guidance can often be taken from successes and failures in the past. I think this is to be appreciated by reading Chapter XVI of this book. For the educational problems of 1930 there is much to be gained by a careful study of events in the last sixty years. This is why one feels that Professor Adamson would add vastly to the services he has already put at the disposal of educationists if he will bring his record at least as far as the recommendations of the Hadow Committee.

In any event, the book under review will be the standard history of the period 1789-1902. Researchers on any branch of English education within this period will do well to consult it first of all ; references are given as foot-notes. The final chapter of the volume treats of the schoolmaster's profession ; it is by no means least in importance or interest.

"English Education" is a work of outstanding character and is bound to take a high place in educational and historical literature. A.P.B.

The Mental Development of the Child : by Karl Bühler. (Kegan Paul, Trench, Trubner and Co., Ltd. Pp. 170. 8s. 6d.)

This book is a short summary of the main contents of the author's larger book "*Die geistige Entwicklung des Kindes.*" It is suitable not so much as an introduction for the elementary student to the psychology of childhood, but rather as an introduction to the views of an important authority like Bühler for the use of those already familiar with general psychology and particularly with child psychology. In the early part of the book Bühler gives a clear exposition of his distinction between the levels of development—instinct, training, and intellect. He includes an interesting account of his own view of the central ideas in Köhler's findings as to the reasoning of apes. The chapter on the aims and method of child psychology is sound and philosophical as one would expect from Bühler, and the philosophical trend of the writer's thought appears also later in the discussion of the development of language and the nature of the consciousness of the infant. The development of drawing receives particular attention, but perhaps the most useful of all the chapters is that on a topic for which one looks particularly to Bühler for helpful discussion, namely, on the evolution of thinking. This is a valuable introduction to the author's fuller discussion in his "*Geistige Entwicklung des Kindes.*" C.W.V.

Modern Language Teaching : by Cloudesley Brereton. (University of London Press. Pp. 279. 7s. 6d.)

Those of us who for twenty years or more have regarded Mr. Brereton as one of our leading authorities on the place and method of modern language teaching in this country were delighted to find that a new book by him had been issued. After his thirty-five years' experience as a teacher and examiner in modern languages, and with his knowledge of French and German schools, it is not surprising that a book of this value and comprehensiveness has been produced. The introduction is written in a delightful style, and sets in proper perspective the main problem of modern languages in the schools. Then Mr. Brereton goes into greater detail for the planning of the work of the first few years and of the later years. Here I profoundly agree with the distinction that he draws between the treatment of abler linguists and those less able, and in his emphasis upon the importance of increasing the proportion of reading of French to that of translating into French, or speaking, for the less able pupils linguistically. A characteristic view which will be challenged no doubt in many quarters is that the more able the pupil the more suitable the direct method; but whatever view Mr. Brereton puts forward he does it in an undogmatic and reasonable way and throughout there is evidence of great common sense and balance, in addition to acute reasoned thought. The later chapters dealing with examinations are particularly valuable at the present time, and, indeed, there are in this volume few topics connected with the whole problem of modern languages in schools and colleges on which Mr. Brereton does not give us light and leading. C.W.V.

Modern Language Teaching and Learning with Gramophone and Radio : by T. Beach, B.Com. (Lond.). (Heffer, Cambridge. 3s. 6d. Pp. vii + 99.)

The problem of the value of mechanical devices in the class-room of the modern language teacher is one which has to be faced by every teacher anxious to give his pupils every opportunity of learning. The value of the gramophone is now generally recognized, and, with the coming of electrical recording, it

can play an important part in the teaching of pronunciation and intonation. The position of radio is somewhat different. Apart from the question of technical development, there is, as Mr. Beach points out, the question of the most useful type of wireless lesson. These and other aspects of the problem his book discusses. He puts clearly the conditions essential to success in the adoption of these devices, and gives many practical hints for their use. He gives some indication of developments in other countries, and shews how the private student may best profit by these aids. The book is a useful contribution to the technique of modern language teaching and learning. E.W.T.

Characters and Events : Popular Essays in Social and Political Philosophy : by John Dewey, in 2 vols. (George Allen and Unwin. Pp. 845. 21s.)

It is good to have so many of Dewey's essays (nearly all his published popular articles) collected together. The first half of Vol. I (Book 1) deals with "Characters"—including poets and philosophers—and forms a unity of its own. Book 2, "Events and Meanings," is half about China, with essays on Japan and Germany. Book 3, of special interest to English readers, consists of essays on various aspects of American life, including several on Education. Book 4 deals with War and Peace; and Book 5, "Towards Democracy," is of a more miscellaneous nature, with particular attention to social philosophy.

It need hardly be said that they are all welcome. Our only doubt is as to whether the editor, Mr. Joseph Rother, would not have done better to publish them as two—or three—separate books, as the topics are so diverse.

Pedagogically Speaking : Essays and Addresses on Topics more or less Educational : by Felix E. Schelling, John Welch Centennial Professor of English, University of Pennsylvania. (Univ. of Pennsylvania Press, and Humphrey Milford, London, 1929. Pp. ix+169. 8s. 6d.)

Professor Schelling's ideal of a University is not far from J. H. Newman's, but, unlike Newman, he leaves one's mind feeling a little battered and gritty, with too much scolding and girding. His objects of dislike include the professional study of education, but he holds strong opinions on the best curriculum for children, and regrets that his ten-year-old grandson should know so much of prehistoric Crete while his knowledge is still imperfect in spelling and in the Presidents of the United States. The book is beautifully produced.

Psycho-Analysis and Art : by George Whitehead. (John Bale, Son and Danielsson, Ltd. Pp. 146. 5s. net.)

The title of this book is misleading, as it contains nothing that can strictly be termed "psycho-analysis" and very little about anything that can be called "art."

Mr. Whitehead's main theme is to trace the history of civilization interpreted as the gradual sublimation of primitive instinctive tendencies: the subject-matter of art is among the phenomena which exhibit this development.

In common with other psycho-analytical psychologists, Mr. Whitehead fails to recognize that it is the form of art rather than its subject-matter which gives it its distinctive characteristics apart from other manifestations of thought. The analysis of subject-matter, interpreted as sublimation, can therefore furnish us with no criteria for art.

Educational Psychology : by Rudolf Pintner. (Williams and Norgate. Pp. 362. 10s. 6d.)

This is a useful kind of text-book for beginners in psychology who are paying special attention to the problems of education. The first part deals with original nature and includes a discussion of matters of measurement of intellectual and non-intellectual traits. The second part deals with the modification of our original nature and includes a number of very well-chosen topics such as learning powers, the transfer of training, and a new type of examination. It is all set out in a clear way and the arrangement seems to us most useful and suitable. There are frequent summaries and occasional tests of the students' knowledge arranged in forms of modern tests of intelligence of the true-false statement type.

Towards a New Education : edited by William Boyd, M.A. (Alfred A. Knopf. Pp. 498. 10s. 6d.)

This is a record of the lectures and discussions at the World Conference of Education Fellowships, held at Elsinore, Denmark, in 1929. Considering the very large number of speakers and topics dealt with, Dr. William Boyd has accomplished a very difficult task as well as could have been expected. Problems of modern education are dealt with by an almost bewildering variety of speakers; yet, as Sir Michael Sadler says in his introduction, teachers and students can hardly fail to find many things suggestive in the book, although the treatment of any particular subject must necessarily be sketchy and incomplete.

The New Education in Europe : by Frederick William Roman. (Routledge and Sons. Pp. 438. 18s.)

This second edition of an already useful book provides carefully revised material in reference to the educational ideas and organizations of Great Britain, France, and Germany, and, in addition, some exceedingly useful chapters on Scandinavian countries, Austria, Italy, and Russia. The careful revision and these extensions make the book an even more valuable work of reference and an excellent guide to the main movements of education in the respective countries.

FOREIGN JOURNALS.

Zeitschrift für Pädagogische Psychologie. (June, 1930.) Contains an article by F. KRAUSE, "Zum Problem der Schulreife."

School-ripeness is here considered not as secondary school leaving certificate but as infant school entrance examination; not, however, to determine whether they should enter, but what to do with them after entrance. Performance tests suitable to age six were used. On this basis children were indicated (1) who seemed likely to go through to the secondary schools course, (2) who would make the ordinary course, and (3) those who would hardly manage this, but would fail to get their removes and would possibly have to transfer to special class or special school. Graphical tables are given showing the entrants for three separate years, their rank on testing, their places in the elementary school, and their subsequent dispersion, on the whole and crudely in agreement with prediction, the best to Oberschule or Sprachklasse, the middle ranks (as originally tested) Normal, the lower ranks to Sonderklasse or Hilfsschule. Progress depends very much on happy home conditions and mutual confidence between child and parents, some statistical deviations correspond to death or divorce.

H.R.

PUBLICATIONS RECEIVED

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ENGLISH.

François Rabelais : Man of the Renaissance : by Samuel Putnam.
(Jonathan Cape. Pp. 530. 12s. 6d.)

Cart Wheels and Catkins : by Wilfred Thorley. (Harold Shaylor, Ltd.
Pp. 79. 3s. 6d.)

The Latin Poems of John Milton : Cornell Studies in English XV :
edited by Walter MacKellar. (Yale University Press. Pp. 382. 13s. 6d.)

English Simplified for Foreign Students : by Rankin Wenlock.
(Macmillan and Co. Pp. 146. 2s. 6d.)

A Book of Classical Stories : edited by A. J. Merson, M.A. (Harrap
and Co. Pp. 220. 2s. 6d.)

The Discovery of Poetry : by P. H. B. Lyon, M.C., M.A. (Edward Arnold
and Co. Pp. 220. 2s. 6d.)

An English Class Book : by T. U. Davies. (Bell and Sons. Pp. 128.
2s.)

HISTORY.

A History of Europe : The Middle Ages : by I. L. Plunket, M.A., and
R. B. Mowat. (Clarendon Press. Pp. xix + 821. 8s. 6d.)

Europe and the Modern World : by R. B. Mowat. (Oxford : Clarendon
Press. Pp. 821. 8s. 6d.)

English People of the Past : Vol. III, 1603-1832 : by M. J. Whicher and
R. J. Mitchell. (Longmans, Green and Co. Pp. 180. 2s. 6d.)

England's Story : Part III : The Stuarts and the Georges : by D. M.
Stuart. (Harrap and Co. Pp. 882. 3s.)

England in Tudor and Stuart Times : by Robert M. Rayner. (Longmans,
Green and Co. Pp. 375. 4s. 6d.)

Historical Atlas : prepared by William R. Shepherd. (University of
London Press. Pp. 115. 22s. 6d.)

This is the seventh edition of this atlas. It has been revised and enlarged and
is now of the greatest value to all students of history.

FRENCH.

Les Malheurs de Sophie : by Mme la Comtesse de Segur : edited by
Roberta Mansfield. (Longmans, Green and Co. Pp. 95. 1s. 6d.)

PUBLICATIONS RECEIVED

French Prose for Later Stages : by E. B. Jones and P. L. Murphy.
(Harrap and Co. Pp. 139. 2s. 3d.)

Siepmann's School Certificate French Course : by Otto Siepmann.
(Macmillan and Co. Pp. 259. 2s. 6d.)

Modern French Course : by Mathurin Dodo, Ph.D. (D. C. Heath and Co.
Pp. 546. 4s. 6d.)

GERMAN.

German Lyrical Poetry : by Norman MacLeod. (The Hogarth Press.
Pp. 158. 3s. 6d.)

GEOGRAPHY.

The Columbus Regional Geographies. Senior Series. Book I : The Southern Continents : by Leonard Brooks and Robert Finch.
(University of London Press, Ltd. Pp. 256. 2s. 6d.)

New Age Geographies. Book I : At Home : by L. Dudley Stamp and Elsa C. Stamp. (Longmans, Green and Co. Pp. 90. 1s. 6d.)

New Age Geographies. Book IIIa : Round the World : by L. Dudley Stamp and Elsa C. Stamp. (Longmans, Green and Co. Pp. 168. 2s.)

Experimental and Open-air Geography : by A. Wilmore, D.Sc. (Bell and Sons. Pp. 198. 1s. 9d.)

At Home : by L. Dudley Stamp and Elsa C. Stamp. (Longmans, Green and Co. Pp. 92. 1s. 6d.)

Introductory Studies in Geography : by E. J. Daughtry. (Heinemann, Ltd. Pp. 203. 2s. 3d.)

MATHEMATICS.

Arithmetical Dictation : by Alfred Wisdom. Book VII. (University of London Press. Pp. 53. 1s. 4d.)

Intermediate Mechanics and Dynamics : by D. Humphrey. (Longmans, Green and Co. Pp. 382. 10s. 6d.)

Reason in Arithmetic : by E. A. Greening Lamborn. (Oxford : Clarendon Press. Pp. 139. 3s. 6d.)

SCIENCE.

Among the Insects : The Strange Old Man : by S. H. Skaife. (Longmans, Green and Co. Pp. 96. 2s. 6d.)

Among the Birds : The Strange Old Man, Part II : by S. H. Skaife. (Longmans, Green and Co. Pp. 95. 2s. 6d.)

Under the Sea : The Strange Old Man, Part III. (Longmans, Green and Co. Pp. 91. 2s. 6d.)

Science and the Fishing Industry : by A. C. Hardy. (A. Brown and Sons. Pp. 28. 6d.)

Principles of Animal Biology : by Lancelot T. Hogben, M.A., D.Sc. (Christophers. Pp. 332. 8s. 6d.)

Mathematical Astronomy : by C. W. C. Barlow, M.A., B.Sc., and G. H. Byran, Sc.D., M.A., F.R.S. (University Tutorial Press. Pp. 445. 9s. 6d.)

Heat and Light : by R. G. Shackel, M.A. (Longmans, Green and Co. Pp. 375. 4s. 6d.)

Heat, Light, and Sound : by R. G. Shackel, M.A. (Longmans, Green and Co. Pp. 472. 5s. 6d.)

Alternating Current Electrical Engineering : by W. T. Maccall, M.Sc., M.I.E.E. (University Tutorial Press. Pp. 496. 15s.)

The Materials of Life : a Simple Presentation of the Materials of Biochemistry : by T. R. Parsons, M.A., B.Sc. (Routledge. Pp. 288. 10s. 6d.)

Educational Biology : by John C. Johnson, Ph.D. (Macmillan and Co. Pp. 360. 12s. 6d.)

MISCELLANEOUS.

From Moses to Elisha. Old Testament. Vol. II : Israel to the end of the Ninth Century : by L. Elliott Binns. (Oxford : Clarendon Press. Pp. 248+15. 4s. 6d.)

Empire Stocktaking : by L. St. Clare Grondona. (Simpkin, Marshall, Ltd. Pp. 366. 10s. 6d.)

De Electione Gratiæ and Quæstiones Theosophicæ : by Jacob Böhme, translated from the German by John Rolleston Earle, M.A. (Constable. Pp. 327. 10s. 6d.)

Home Trade : by M. Clark. (Longmans, Green and Co. Pp. 276. 3s. 6d.)

A Hindustani Binet Performance Scale : by C. Herbert Rice, M.A., Ph.D. (Oxford University Press. Pp. 196. 9s.)

- The Great Investment : Secondary Education in a Democracy :**
by T. H. Briggs. (Harvard University Press. Pp. 143. 5s. 6d.)
- Don't be Tired :** by Dr. Peter Schmidt. (Putnam's Sons. Pp. 143. 3s. 6d.)
- The Girl Voter :** by E. M. White. (Herbert Russell. Pp. 127. 2s.)
- The Gospel According to St. Luke :** with Introduction and Commentary
by H. Balmforth, M.A. (Oxford : Clarendon Press. Pp. 311. 4s. 6d.)
- Cabinet Making : Theory and Practice :** by Alfred L. Keeble. (Longmans,
Green and Co. Pp. 174. 3s. 6d.)
- Handwork in the Senior School :** by William Summers. (Edward Arnold
and Co. Pp. 155. 5s.)
- Making a Home :** by Mrs. Janet Cleeves. (Routledge Introductions to
Modern Knowledge. Pp. 78. 6d.)

The Training College Bulletin

Edited on behalf of the

TRAINING COLLEGE ASSOCIATION

by

The SECRETARY and Lt.-Col. W. J. DOUGLAS,
Saltley College, Birmingham.

No. 22

FEBRUARY, 1930

ANNUAL MEETING, January 3rd, 1930.

PRESIDENTIAL ADDRESS.

The spirits of many members of the T.C.A. must have suffered a momentary depression when they looked at the agenda for this meeting and saw that they were invited to listen, not only to a lecture by Mr. Gater on the raising of the school age, which they would await with eagerness, but also to a Presidential Address, which would seem, under the circumstances, entirely superfluous. The rules of the Association, however, insist that the President shall give an address, and an address I shall deliver, bearing in mind the wise notice common in American business offices, which *Punch* inexplicably laughed at two or three weeks ago: "Say it in five minutes, you're not Shakespeare."

When one comes to the end of a year of office, it is natural to cast a look back over the past and a glance forward to the future. Nineteen twenty-nine has been a notable year in the history of education in this country, and will rank with 1870, 1902, and 1918 as one of the landmarks in the progress of our educational system. It has been a great blot on our nation that of approximately 670,000 children who reach the age of 14 each year, nearly 600,000 receive no further education at school. Just at the age when boys of a different social class leave their preparatory schools and enter on the most important part of their school life, these hundreds of thousands of boys and girls are thrown on an over-stocked labour market. The tragedy of unemployment, which so

many of them have to face, has as the reverse of the medal the tragedy of work which, in many cases, is unsuited to the growing boy or girl and which has resulted in physical ills the extent of which among men only became apparent when the mass of the population of military age was medically examined during the war.

We must beware, however, of speaking or thinking of the extension of the school age to 15 as if it were the coping stone of our system of elementary education. The principle that primary education should end at 11 or 12, and post-primary education should then begin, has now been accepted, but it cannot be denied that much more satisfactory courses can be planned for pupils of 11 to 16 than for the 11 to 15 stage, and educationists must hope that the time is not far distant when 16, not 15, will be the school-leaving age for boys and girls who do not enter the secondary schools.

This is looking to the future, and even the present does not seem very secure. Many attempts, open or covert, are being made to wreck the Act of 1929, and it is to be feared that in some districts an impression has become prevalent that it will either not be put into force at all, or that, if it does ever take effect, it will be at a much later date than 1931.

It is the work of associations such as the T.C.A. not only to combat this defeatist policy, but to try to change the attitude of mind that produces it.

The purpose of education is still ill-conceived by a large proportion of Englishmen, and amid the multiplicity of voices talking about the three R's, about inefficient office-boys and unwilling servant-girls, about the high rates and the superfluity of black-coated workers, it is not surprising if the ordinary man becomes bemused.

General Smuts said once in a lecture that humanity has struck its tents, and is everywhere on the march. He could not have expressed more happily the outstanding characteristics of this age. There has surely never been a period in the history of the world in which such far-reaching changes in the social systems and the outlook of peoples have taken place as the last quarter of a century. We are all pressing forward to what

we faintly hope will be a more ideal way of life, marked by wider knowledge, by the lessening of suffering, by peace, by international co-operation, and there has never been a time when mankind has had more poignant need of the mental power, the capacity for leadership and for service, and, above all, of the vision that a noble and generous education can inculcate or develop.

It is our task to try to bring this home to the public mind, and we are fully alive to the fact. I do not think it is any exaggeration to say that, in every area of this country in which a university or training college stands, work of incalculable value in educating public thought is being done to-day. But if any real measure of success is to be achieved, it is evident that our efforts must be doubled and re-doubled.

ANNUAL GENERAL MEETING.

Held on January 3rd, 1930, at the London Day Training College.

Miss May, the President, was in the chair. There were present: Dr. Curzon, the President-elect; Miss Paine, the Vice-President-elect; Lt.-Col. Douglas, Professor Valentine, and 150 members representing forty-nine training colleges and university departments.

The President, from the chair, moved a vote of congratulation to Professor Sir T. Percy Nunn upon the honour of knighthood conferred upon him by His Majesty the King, which was carried with acclamation.

The Secretary reported as follows:

Six Council meetings have been held during the year, and committees of the Council have met in connection with these meetings.

In June evidence was given by the T.C.A. and Council of Principals to the Consultative Committee on *Junior Schools*. Prior to this a questionnaire was sent to all colleges and a written memorandum based on the answers received was sent to the Committee. When they gave

evidence the representatives were asked to expand the memorandum by a fuller section on the Training of Teachers for Junior Schools. This was drawn up and sent to the Committee during the autumn term.

On May 10th a small conference was held with the Association of Head Mistresses and Head Masters. This conference was mainly occupied in discussing the report of the Departmental Committee on the Training of Teachers for Rural Schools. On this subject Miss Allan and Miss May were the principal speakers on behalf of the T.C.A. Further discussion took place on the widening of the Higher Certificate Course, and the inclusion of biology in the school curriculum, and a discussion upon the admission of candidates to training colleges. During the conference it became clear that there existed considerable misunderstanding of the training college point of view in regard to the report on Training for Rural Schools in the minds of other educationists. It

was, therefore, decided at a Council meeting on the following day that a concise statement of this policy should be drawn up and sent, with the concurrence of the Council of Principals, to other educational associations. This was sent out in June.

In the early months of the year the attitude of the Board of Education gave the Council reason for increased concern. Accordingly, on March 20th, a deputation from the Joint Standing Committee attended the Board. The officials of the Board, whilst in favour of Third Year Courses in the so-called *practical* subjects, whether continuous or deferred, and not averse to *academic* Third Year Courses, if they were *deferred*, showed plain opposition to *continuous* Third Year Courses in academic subjects, such as History or English. The deputation sought to combat this view. A circular which has just been issued by the Board shows that for the next two years at least anxiety may be allayed, but the Joint Standing Committee will continue to press the point.

In June the Council, at the invitation of the Eastern Branch, held their meeting in connection with the meeting of the Eastern Branch, at Cambridge. On Saturday, June 22nd, the Council were most kindly entertained at luncheon at the Garden House Hotel, and then proceeded to Homerton College, and listened to a delightful lecture from Professor Dover Wilson which was followed by tea at Miss Allan's kind invitation.

The connection between the T.C.A. and the N.U.T. has been maintained throughout the year. On May 24th the Tripartite Committee met at Hamilton House, the main points under discussion being the training of rural teachers, demonstration Schools, and the restriction of grants and scholarships for study at foreign universities and training institutions. The question of demonstration schools is being reconsidered by the Council

and Branches, and will be brought to the Tripartite Committee again on February 14th.

In October Miss Mercier, Miss Phillips, Dr. Curzon, and Miss Fildes represented the T.C.A. at a conference with the Education Committee of the National Union of Women Teachers. The N.U.W.T. felt considerable misgiving in regard to the new examinations—both as to their standard and as to the danger of the vocational nature of the training college course being lost in the new schemes. Miss Mercier and Miss Phillips spoke at length, and were able to give the N.U.W.T. certain information which they sought. It was felt that the meeting was an extremely useful one, and the hope was expressed that the two Associations would continue to keep in touch with each other.

During the autumn term a further meeting with the Association of Directors and Secretaries for Education was held. A discussion took place on the question of the staffing of the new senior schools. A further meeting will be held on the same subject in the spring term.

The Council have considered during the year the possibility of holding a conference of the Association in Geneva in 1930. The colleges were circulated and expressed themselves in favour of such a conference. It has therefore been decided to meet in Geneva from July 27th to August 8th, in connection with the Geneva Institute of International Relations and the Geneva School of International Studies.

The T.C.A. has been represented during the year on various other educational and social committees and conferences, such as the Home and School Council, the Teachers' National Committee, the New Education Fellowship, the Central Council for School Broadcasting, the Joint Conference on Education and the League of Nations, and a conference on Educational Films.

The Secretary's report was adopted.

The Treasurer made his annual report, and moved the adoption of the balance sheet. He warned the Association against any unnecessary expenditure in view of the fact that although the balance had increased, the income had somewhat decreased during the past year. (The balance sheet is included separately in this issue.) The Treasurer's report was adopted, and a vote of thanks passed to him for his work on behalf of the T.C.A.

The President addressed the Association. (A brief report of her address is included separately in this issue.) A vote of thanks to Miss May for her address and for her work on behalf of the Association during her Presidency was proposed by Sir Percy Nunn, seconded by Lieut.-Col. Douglas, and carried unanimously.

Professor Valentine presented the annual report and balance sheet of *The Forum of Education*. He appealed to members for contributions suitable for publication in *The Forum*. A criticism was sometimes made that too many of the *Forum* articles were concerned with psychological and philosophical research. Personally he

would be glad to see a greater variety, if articles were forthcoming. He would give every consideration to articles bearing specially on the training of teachers.

Professor Valentine's report was adopted, and a vote of thanks to him moved by Miss May, seconded by Sir Percy Nunn, and carried unanimously.

The report of the Editors of the *TRAINING COLLEGE BULLETIN* was presented and adopted.

Mr. Holgate presented the report of the Conditions of Service and Salaries Committee. (This is included separately in this issue.) A very hearty vote of thanks to Mr. Holgate was carried unanimously.

The Association then received an address on "The Raising of the School Age" from Mr. G. H. Gater, Chief Education Officer to the London County Council. This address, which was followed by discussion, is printed in full in the current issue of *The Forum of Education*.

There was no afternoon meeting this year, but on the evening preceding the general meeting an evening reception was held at Whitelands College, and attended by about 100 T.C.A. members and other guests.

RELIGIOUS EDUCATION.

The Religious Education Committee of the T.C.A. hope that it will be possible for the Editor of *The Forum* to find place in the summer issue for a review of the Report of the Archbishop's Commission on Education. The present note is merely a stop-gap to direct the attention of members to the Report and to point out for those who have not read it the main points of interest. For the first time, I believe, the attention of the Church is directed not to the first stages of education only, but to the wider field, and the work of the universities is considered not only as vital in itself, but also in its relation to every constituent part of the system of national education.

"The most valuable education work which the Church can do is 'the supply of fit persons' through whom the

fundamental truths of religion can be imparted." These words from the Chairman's preface sum up the guiding thoughts of the Report, and carefully considered will be found to point the way to a fresh and most hopeful direction of effort and energy. We have but recently emerged from a long period of controversy; the causes of strife have lain in attempts to concentrate on types of organization and control. But to inspire individuals with faith and the passion to serve, to offer scholarship and knowledge to all who will receive it, to spread her message as of old through men and women permeated by it, will light the fires not of strife but of renewed hope and devotion, both in education and religion.

W. MERCIER.

DIVINITY AS A SUBJECT IN THE NEW EXAMINATIONS.

The position of Divinity in the training college curriculum was discussed at a recent meeting of the Religious Education Committee of the Training College Association.

From an enquiry that was made some few years ago it appears that religious instruction is included in the curriculum of the majority of the training colleges, either as an optional or a voluntary subject.

For reasons which are obvious it has never been one of the examination subjects in the Teachers' Certificate Examination of the Board of Education.

It is understood, however, that under the new examination schemes, in certain areas, at any rate, there might be little difficulty in providing for its inclusion, and it was suggested by the Religious Education Committee that such colleges as would welcome this recognition for the subject should urge its claims upon the examining bodies with whom they are connected.

It is of special interest to record that in the London University Examination for the Teacher's Certificate Divinity is recognized as an optional subject of ordinary standard in the case of one college, and as an advanced course subject in the group of colleges associated with King's College. The subject may not form one of the four or five which must be offered by candidates, and necessarily the numbers who take it under such conditions must be limited, but its inclusion in the examination at all is a matter for congratulation to all who are anxious to improve the teaching of what is admittedly one of the most difficult subjects in the school curriculum.

Apart from other considerations of vital importance, the recognition of the subject in this way gives it a certain academic status which is of definite value. It provides too for

such colleges as desire it the opportunity to send out each year a few students who have had a somewhat more specialized preparation for giving religious instruction in the schools.

The syllabus followed by the King's College group of training colleges may be of interest to other colleges, and is appended.

The Religious Education Committee would be glad to have further information as to the position of Divinity in relation to the new examinations in other areas.

Divinity Syllabus.

University of London, King's College Group.

ADVANCED COURSE.

Throughout the course attention will be paid to methods of teaching in the subject in elementary schools, and to the selection of appropriate subject matter for children at different ages.

I.—New Testament.

- (a) The Life and Teaching of Christ and Acts I—XII.
- (b) Selected subjects (*one to be chosen*).
 - (1) St. Paul.
 - (2) St. John's Gospel.
 - (3) *One of the following Epistles: Galatians, I and II Corinthians, Romans, Philippians, Hebrews.*
 - (4) Early Church History to 451.

II.—Old Testament.

- (a) General Knowledge and Introduction.
- (b) Selected Subjects (*one to be chosen*).
 - (1) The study of a special book or books, e.g., Genesis, Isaiah, Psalms.
 - (2) Literary aspects of the Old Testament.
 - (3) The historical background of the Old Testament.
 - (4) The problem of suffering in the Old Testament.

S. E. S. RICHARDS.

SECTION REPORTS, 1929.

Physical Training.

At the first meeting of the Section, in January 1929, it was decided to send out a questionnaire on the amount of time given to the various aspects of the work, in the time-table and out, and on the physique of the incoming student with reference to the amount of physical training, games, swimming, and dancing done by students during the two years prior to entering college. The response was good, and a report was eventually compiled. What proved to have been a rumour having been circulated that the Board of Education proposed to give up the examination of the practical teaching, a query as to the section's views resulted in the expression of a strong preference in favour of examination by the Board's specialist inspectors. There was not the same directed strength of opinion about the theory examination, though considerable diffused dissatisfaction does exist about the present lack of uniform standard in the personnel, throughout the areas, of the external examiners in the subject.

History.

Reports from the branches show rather less activity than in recent years.

The North-Western and Southern

Branches have held discussions on the teaching of chronology. The Midland Branch has been largely occupied with questions arising out of the new relations with the universities. The North-Eastern Branch was unable to carry out the scheme of work which was planned at its first meeting. The Eastern Branch has held no meetings; geographical difficulties in this district seem almost insuperable, but the question of re-organization is too far-reaching for profitable consideration by the History Section working alone.

At the annual meeting, in January, 1930, Miss Dymond spoke on the historical exhibition organized by her at Goldsmiths' College in May, 1929, and, by request, explained the purpose of the very useful bibliography of which she is the editor: "A Handbook for History Teachers" (Methuen, 3s. 6d.). Mention was also made of Dr. Firth's "The Learning of History in Elementary Schools" (Kegan Paul, 6s.).

It is a healthy sign that suggestions for work in 1930 have come from the Branches. The subjects for study are: (1) The relation of oral to individual work in elementary schools; (2) The organization of the teaching of history method in training colleges.

C.B.F.

REPORT ON CONDITIONS OF SERVICE AND SALARIES COMMITTEE, 1929.

There have been enquiries during the year respecting:

- (a) The appropriate salary for a teacher of music;
- (b) Salary on transference to secondary school;
- (c) The areas in which internal examiners are to receive payment;
- (d) Part-time service in regard to salary and pension;

- (e) Pension allowance due;
- (f) Pension and death gratuity as affected by retirement before 60 years of age;
- (g) Colonial service in regard to pension;
- (h) Pension as affected by change to university work;
- (i) Charges for residence.

A letter has been received from a member who was given advice and assistance a few years ago, and who is now in receipt of pension. The member enclosed a cheque for the funds of the T.C.A. as an expression of appreciation of the efforts made on her behalf.

A matter which has been of gravest concern to the Council and to this Committee is the closing down of an old-established training college, with the consequent dismissal of the staff. Several of our members found difficulty in securing employment. The Council has taken every possible step on their behalf, and at the present time only two of these members are without full-time posts.

Arising out of this case, the Committee took up the general question of tenure, and the President of the Board of Education has been asked that the unsatisfactory conditions of tenure prevailing for teachers shall receive attention in the Education Bill which may be expected before long, and that, in particular, a clause may be introduced designed to secure compensation for a teacher who suffers direct pecuniary loss in consequence of re-organization or closure of the institution in which he may be employed.

The Committee, while not having committed itself as to the advisability or otherwise of attempting to re-open negotiations concerning salaries in the near future, has nevertheless given serious attention to the matter. A suggested basis has been drawn up by the Committee, and approved by the Council, and the branches are to be asked to give it their consideration and report their views to the Council, so that when the Council considers the time has arrived when action might appropriately be taken, it will be aware of the prevailing views of the members whom it represents. It is earnestly to be hoped that these matters will be considered as purely domestic, and treated confidentially by our members, as no good could come of giving publicity to our affairs in this regard at this time. It is now known that the teachers in primary, secondary, and technical schools have agreed with the representatives of their governing authorities to maintain their present scales until April 1932. Our case is, of course, unique, in that as yet we have had no agreed settlement of our salary conditions whatever.

T.P.H.

STATEMENT OF INCOME AND EXPENDITURE

For the year ended 31st December, 1929.

| Income. | | | | | Expenditure. | | | | | |
|-----------------------|-------|----|----|-------|--------------|----|-----------------------------------|-------|----|----|
| | £ | s. | d. | £ | s. | d. | | £ | s. | d. |
| To Balance, 1st Jan., | | | | | | | By Branches..... | 60 | 2 | 6 |
| 1929 | | | | 82 | 0 | 10 | „ Secretary's Salary..... | 125 | 0 | 0 |
| „ Total Receipts | | | | | | | „ Printing and Duplicating .. | 45 | 4 | 2 |
| during year | 629 | 1 | 6 | | | | „ Stationery | 8 | 4 | 1 |
| Less Cheque | | | | | | | „ <i>Forum of Education</i> | 106 | 7 | 0 |
| returned | 1 | 0 | 0 | | | | „ <i>Bulletin</i> | 46 | 11 | 6 |
| | <hr/> | | | 628 | 1 | 6 | „ Expenses of Council Meetings | 141 | 8 | 3 |
| | | | | | | | „ Conveners' Expenses | 7 | 13 | 11 |
| | | | | | | | „ Conference Fees | 3 | 10 | 0 |
| | | | | | | | „ Committee's Expenses | 19 | 0 | 11 |
| | | | | | | | „ Treasurer's Expenses | 1 | 7 | 6 |
| | | | | | | | „ Bank Charges | 0 | 17 | 3 |
| | | | | | | | „ Balance at Bank | 144 | 15 | 3 |
| | | | | <hr/> | | | | <hr/> | | |
| | | | | £710 | 2 | 4 | | £710 | 2 | 4 |

1st January, 1930.

W. J. DOUGLAS, *Hon. Treasurer.*

BRANCH REPORTS, 1929.

North-Western.

OFFICERS :

| | |
|------------------------------|-------------------------|
| <i>Chairman</i> | Miss JENKINS. |
| <i>Vice-Chairman</i> | Professor BOMPAS SMITH. |
| <i>Ex-Chairman</i> | Mr. HAMILTON. |
| <i>Secretary</i> | Miss GILL. |
| <i>Treasurer</i> | Rev. J. SWANN. |

Three meetings have been held during the year, viz., at Mount Pleasant College, Liverpool, on November 24th, 1928, at Manchester University on March 2nd, 1929, and at Crewe Training College on June 1st, 1929.

At the first meeting, at which the Branch welcomed the presence of Miss May and eight Council members, Miss Fisher reported on an important meeting of the Nursery Schools Association. The Principal of Mount Pleasant College then explained a scheme that she and her staff had been working out in their college which would largely professionalize the curriculum. This gave rise to so interested a discussion that it was

decided to consider the matter further.

At the second meeting, therefore, Miss Doherty, of Sedgley Park Training College, read a paper in favour of professionalizing the curriculum, which provoked an animated debate.

At the third meeting Miss Chadwick, of Edge Hill College, read a paper on "Speech Training in the Training Colleges." It was followed by a discussion on the meaning of "Standard English" and on "Speech Training in Schools."

The future source of teachers for the modern schools was considered. Miss Jenkins outlined what was being done at Edge Hill College to train teachers for these schools.

Midland.

Three successful meetings have been held during the year at Birmingham, Cheltenham, and Derby.

Interesting discussions have taken place on "The Hadow Report,"

"The Recruitment and Training of Men Teachers of Handcraft for Senior Schools," "Demonstration Schools," and "Research in Education."

North-Eastern.

OFFICERS :

| | |
|---|------------------------|
| <i>Chairman</i> | Miss M. E. PAINE. |
| <i>Vice-Chairman</i> | Mr. W. P. WELPTON. |
| <i>Ex-Chairman</i> | Professor FRANK SMITH. |
| <i>Hon. Secretary and Treasurer</i> | Miss J. M. CARDER. |

Three general meetings of the Branch have been held during the year. At each meeting reports of the proceedings of the Council, and of developments in connection with the new examina-

tion schemes in Areas I and II, have been given.

The Autumn Meeting was held on November 10th, 1928, at Sheffield University. Thirty-four members were

present. The business section of this meeting, which was the annual general business meeting of the Branch, was followed by a discussion on "The relationship of academic and professional work in any subject," which was opened by Mr. Hoole (Sheffield) and Miss Ryley (Bingley).

The Spring Meeting was held on March 16th, 1929, at Neville's Cross College, Durham. Thirty-eight members were present. An interesting and lively discussion on "The New Curriculum of Area II" was opened by Miss Spalding, who outlined the new regulations for Area II in their relation to the underlying principles that had been established.

The Summer Meeting was held on June 15th, 1929, at St. John's College, York. Thirty members were present. At the close of the business meeting a discussion on "The aims and curriculum of the junior school (7—11 years) and its staffing" was opened by Mr. Welpton, Miss Bone (Hull), and Mr. Wilmott (York). The discussion that followed was concerned mainly with the question of staffing junior schools.

There have been no separate meetings of the Education Committee of the Branch.

Eastern.

During the spring term no meeting was held, as the members were much occupied with Boards of Study meetings in connection with the new examination.

The summer meeting, June 22nd, held in conjunction with that of the Council, was largely of a social nature, designed to give the Eastern members an opportunity of meeting the members of the Council.

A morning visit to Pepys Library was followed by lunch at the Garden House Hotel. The afternoon meeting was held at Homerton College. After the President had given a survey of matters under consideration of the T.C.A., Professor Dover Wilson

addressed the meeting on "Poetry in the Classroom."

The autumn meeting consisted of the usual business routine, followed by a very interesting address from Mr. Foreman, Education Secretary for Cambridge. His subject was "Some problems connected with the raising of the school leaving age." After it members asked questions, and discussed some of the points raised. In order to keep in touch with the secondary schools of the district a joint meeting has been arranged for next May with the Assistant Mistresses Association, when Professor Ernest Barker will speak on "The Central School and the Secondary School."

Southern.

By the kind invitation of Miss Johnson, the summer meeting was held at Bishop Otter College on June 1st. The members were entertained to lunch, after which the business meeting was held in the Common Room at 2-30 p.m., Miss Richards in

the chair. The Chairman submitted a letter from the General Secretary about the expenses of Council members. It was proposed by Miss White and seconded by Mr. Redford that the Southern Branch should agree to the increased allowance of 15s. After

the business meeting a most interesting address was given by Mr. Evan Davis, Secretary to the West Sussex Education Committee, on "The problem of the rural teacher." He expressed with great sympathy the difficulties of the country teacher's life, both from the social and professional point of view, and emphasized the contribution the training colleges could make by sending out each year fresh and enthusiastic teachers. His inspiring address was followed by a spirited discussion in which Miss Johnson, Miss Richards, Miss Hartle, Mr. Jarman, Mr. Burfitt, Mr. Redford, Miss White, and others took part. A very cordial vote of thanks to Mr. Evan Davis was proposed by Miss Hartle, and carried with enthusiasm.

Members had the opportunity, both before and after tea, of going over the college, and later in the afternoon a party visited the Palace, by special permission, and saw the chapel and the beautiful grounds.

Mr. Jarman, speaking on behalf of all the members present, thanked

Miss Johnson very warmly for her generous hospitality to the Southern Branch; this was seconded by Miss Richards, and carried with acclamation.

It was decided by the Committee, held on October 3rd, that head mistresses of secondary schools should be invited to the general meeting in December, and that the subject for discussion should be problems relating to the Hadow Report. Miss Fox, Head Mistress of Beckenham County School, very kindly consented to read a paper, and took as her subject: "The Preparation of the Teacher," with special reference to the breadth of curriculum required by new conditions. Her stimulating and delightful address raised several controversial points, and was followed by a lively discussion, in which Miss Hartle, Miss Gowan, Miss Mercier, Miss Richards, Dr. Curzon, Miss Haslam, and others took part. A most cordial vote of thanks and appreciation was proposed by Miss Mercier and seconded by Mr. Redford.

PHYSICAL TRAINING SECTION.

REPORT ON QUESTIONNAIRE CIRCULATED FEBRUARY, 1929,

On (a) Time Allotted to Physical Education.

(b) Physique of Incoming Students.

Questionnaires were returned from :

Bede, Durham (194 men), Carmarthen (153), Caerleon (105), Chester (160), Culham (90), Winchester (144), York (133), Aberystwyth, University College (130 men), Bangor, University College (30 men), Cardiff, University College (75 men).

Bangor Normal College (200 women), Bangor, North Wales T.C. (107 women), Barry (150), Cheltenham, St. Mary's (170 women), Bishop's Stortford (131), Endsleigh T.C., Hull (136), Edge Hill (150), Fishponds (104), Goldsmiths' (315 women), Homerton, Cambridge (200), Mount Pleasant, Liverpool (118), Neville's Cross, Durham (120), Norwich (100), Ripon (140), Saffron Walden (63), Sheffield City T.C. (138 women), Swansea (176), Warrington (150), Aberystwyth University College (141 women), Cardiff University College (62 women), Birmingham University (158 women), Maria Grey T.C. (135), Bingley (200).

The number after each name shows the number of students considered under (a) for the purpose of the questionnaire.

Replies were also received from representatives of Manchester and Sheffield Universities, but the special conditions made correlation of information in the report difficult.

The aim in correlating these facts has been to note the average usage and in addition, to give particulars of any point of special interest.

(a) Time per Week on the Time Table for Physical Training.

Thirty-four replies were received to this question, six from men's and twenty from women's two-year colleges, and four each from men's and women's university training departments.

The average time per week for the subject appears to be ninety minutes, that is, two periods.

Of the two-year colleges, Hull has four hours per week on the time-table, one and a half hours for physical training, half hour for theory, and two hours for games; Mount Pleasant has 180 minutes per week plus half-hour per week for games; Saffron Walden has four periods totalling three hours per week; Cheltenham two hours per week, plus half hour for theory, and a period for folk dancing; Fishponds one and a half hours per week, and one hour for organized games. Homerton has two periods per week—ninety minutes—plus in the junior year a course of ten to twelve games lessons. Norwich and Swansea have 135 minutes per week; at Swansea forty-five minutes of this is allotted to dancing. Bingley has four forty-minute periods, two practical, one theory, and one country dancing.

In twenty two-year colleges theory is included in the practical time, and is incidental.

Of the university departments, Aberystwyth (women) has 180 minutes per week, an hour of which is theory. One hundred and twenty minutes per week seems to be the average. Birmingham (women) has ninety minutes, but there is additional time allowed for theory, and one hour per week for normals, for games.

Maria Grey, which trains only one-year post-graduate and three-year students, has 120 minutes with additional time for dancing.

Infant Method Course.

Twenty-three women's colleges and departments replied; of these twelve take infant method students separately throughout the course; nine always take infant, junior, and senior method students mixed together; two, Saffron Walden and Maria Grey, take no senior method course. At Hull, although different method students are mixed in the usual P.T. periods, wet afternoons are occasionally used for special infant method classes.

At Neville's Cross, during the first year, all students do one term's course each in (1) infant, (2) junior, and (3) senior method, while in the second year, infant and junior method students make a separate group for the whole year.

At Norwich the students taking infant method are separated after the first term; at Ripon there is such separation for four terms of the course. Edge Hill and Homerton have occasional separate classes.

Swimming.

In twenty women's and nine men's training colleges and departments, no extra time is allowed for swimming. In a number of these swimming is voluntary in the students' free time; in other no facilities exist. In three women's colleges extra time is allowed. Land drill is taken during physical training practical time in a number of colleges. At Homerton the students run a swimming club. At Edge Hill three P.T. periods during the summer term and at the North Wales T.C. two such periods are given to swimming. At Goldsmiths' there is voluntary practice during two dinner hours, and one afternoon per week.

Dancing.

Twenty-three women's and seven men's colleges answered this question. In six men's and five women's colleges no extra time on the time-table, or voluntarily, is allowed, but a proportion of dancing is taken in the P.T. practical period. In seven women's colleges time on the time-table is set apart for dancing, the periods varying from thirty to forty-five minutes.

In eleven women's and one men's colleges the holding of a voluntary class is mentioned. At Homerton attendance is confined to the senior year. At one women's college, a weekly voluntary class is held, but, owing to the lack of space, the students have to be divided into two sections, thus attending fortnightly. The lecturer continues: "The class frequently has to be cancelled for rehearsals, school practice, lectures, etc." Goldsmiths' have a country dance club, which meets after lecture hours one evening per week for one and a half hours.

The students of the Chester T.C. have opportunity of attending the Chester Folk Dance Society's Class.

At the North Wales T.C., Bangor, in addition to the voluntary class, a country-dance dance is held during the autumn term, and a "house" country dancing competition during the Easter term.

Games—Practice and Coaching.

No men's college and nine women's colleges have time during each week earmarked for games, additional to the P.T. time. In all other colleges reporting (thirteen women's and ten men's) games are voluntary, and played in the students' free time. Colleges with specially earmarked games periods, also, of course, have voluntary games.

At Neville's Cross one afternoon per week is given to compulsory games. At Norwich there are two forty-five-minute periods per week, one for hockey, the other for netball. Rounders and stoolball are substituted in the summer term.

The Caerleon report makes special mention of the organization during voluntary games time of inter-section matches, so that the moderate player is surer of inclusion.

In only one college, Bangor Normal, are games taken during private study time. There, during each week, each student has one stated private study time when she is due to play games, either netball or stoolball. Thus this does not mean that any student can arrange to play games during any study period.

Practice in Teaching (apart from School Practice).

Eight men's and twelve women's colleges report that they have no extra time for teaching practice beyond the P.T. periods. Students teach each other in class, and in a number of cases classes of children come up to the colleges for demonstrations and for teaching by the students during the P.T. period times. In Caerleon the students go to the practising school and teach during the P.T. period time. At Ripon the lecturer gives six demonstrations during the first year with children during the P.T. period.

Two men's colleges and eleven women's colleges have extra time for teaching practice, which consists usually of extra criticism lessons in schools or the teaching of classes of children that come to college or observing other students teach. At Neville's Cross four to six classes of children come each week and are taken by students, who are free on the time-table. At Barry, eight second-year students are taking extra physical training and hygiene, which consists of (a) taking one lesson per week in the demonstration school, (b) an additional period on the time-table for games, dancing, and discussion, (c) a short hygiene thesis at the end of the second year. At Chester the men students work in turns at the evening play centre during their first year.

At Edge Hill, in the first year, in addition to one P.T. period per week, there is one forty-minute teaching period. In this, during the first two terms, games and activities only are taken, and a complete table in the third term. During the first school practice students teach games and activities only.

At the Bangor Normal College, the students are responsible for the P.T. in three local schools—two infants, one senior mixed—for three afternoons per week. Each student takes the same class for three consecutive lessons, and thus has opportunity to see and make make progression in work. The lecturer discusses the lesson notes beforehand, and the teaching, as far as possible, but students make written comments on their own teaching, and give reasons for alterations in work. For this, one afternoon's lectures would be missed by each student during the second year.

School Practice.

Nine men's and twenty-one women's colleges answered this question. Of these three men see nothing but P.T., while five supervise a group of students only in general subjects. At Chester the lecturer supervises a group in general subjects during one year and P.T. during the other, while at Caerleon the lecturer has opportunities during school practice of seeing the specially weak students.

Nineteen women lecturers supervise nothing but P.T. during school practice. At one college the lecturer supervises one group of students, and has no chance of seeing the rest of her students. At another, while supervising a group of students, the lecturer has opportunities on two or three afternoons a week of seeing students other than those in her group teaching P.T.

In the larger colleges it is often impossible for the lecturer to see all students teaching' in the short school practice time available.

Written Work in Term—not Terminals.

Two men's and five women's colleges give no written work during term time. Five men's and eighteen women's colleges report that they give written work. The amount varies very much and is usually, apparently, less when the P.T. lecturer also has to deal

with hygiene. Two or three questions per term seems to be the average. At one college four or five essays are done per term, but, owing to lack of time, not all are marked. At the North Wales T.C. students sometimes make games schemes and programmes in twos, thus reducing correction. At Bingley sometimes groups discuss questions and send in their joint production.

Terminals, excluding Finals.

Only the university training departments reporting with the exception of Aberystwyth University College, appear to have no terminal tests other than the final examination.

Four women's and three men's colleges held combined practical and theoretical tests. Most colleges test practical and teaching ability from observation, but the marking does not usually count in terminal results.

Fourteen women's and four men's colleges hold only theoretical terminal examinations.

Five colleges hold terminals during five terms. The average number is three in two years.

At Ripon, in addition to terminals, there is a P.T. house competition in the first year, and a posture test in both first and second years, when students are tested by the lecturer and apply tests to themselves in groups of about eight.

At the North Wales T.C. there is a combined practical and theoretical test at the end of the first term. The practical part of the examination aims to assess the progress in posture and general mobility, and the students' extra P.T. posture throughout the term is taken into account. Other tests used are: Pt. stp. st.; str. st.; head pressing backwards; light complete landing from a low jump to crouch position.

(b) Physique of Incoming Students.

The aim of the inquiry was "to find out the amount of physical training done by present first-year students during their last two years in their secondary school previous to entering college."

| <i>College.</i> | <i>Number questioned.</i> | <i>Number P.T.</i> | <i>Number Games.</i> | <i>Number Dancing.</i> | <i>Number Swim- ming.</i> | <i>Number Swedish Apparatus</i> |
|-------------------------|-------------------------------|------------------------|--------------------------|----------------------------|-----------------------------------|---|
| WOMEN. | | | | | | |
| Bangor Normal .. | 94 | 11 | 36 | 40 | 89 | 48 |
| Bangor U.C.N.W. .. | 52 | 3 | 3 | 16 | 41 | 21 |
| Barry | 75 | 14 | 19 | 37 | 75 | 34 |
| Cheltenham | 42 | 4 | 2 | 16 | 20 | 8 |
| Bishop's Stortford .. | 68 | 12 | 21 | 34 | 52 | 24 |
| Endsleigh T.C., Hull.. | 41 | — | 2 | 13 | 27 | 3 |
| Edge Hill | 12 | 0 | 2 | 4 | 11 | 4 |
| Fishponds | 50 | — | 7 | 20 | 33 | 25 |
| Goldsmiths' | 120 | 6 | 6 | 72 | 62 | 16 |
| Homerton | 99 | 15 | 5 | 45 | 70 | 13 |
| Mount Pleasant .. | 62 | 6 | 6 | 12 | 29 | 6 |
| Neville's Cross, Durham | 40 | 5 | 3 | 13 | 32 | 5 |
| Norwich | 50 | 0 | 3 | 8 | 30 | 14 |
| Ripon | 74 | 4 | — | 14 | 64 | 12 |
| Saffron Walden .. | 29 | 1 | 0 | 8 | 14 | 3 |
| Warrington | 73 | 5 | 7 | 20 | 55 | 10 |
| Aberystwyth U.C. .. | 16 | 4 | 2 | 9 | 11 | 7 |
| Cardiff U.C. | 24 | 2 | 5 | 3 | 20 | 6 |
| Birmingham U. .. | 49 | 3 | 2 | 19 | 13 | 1 |
| Maria Grey | 19 | 1 | 0 | 13 | 7 | 5 |
| Bingley | 100 | 2 | 3 | 24 | 72 | 9 |
| MEN. | | | | | | |
| Carmarthen | 30 | 2 | 0 | 28 | 27 | 19 |
| Chester | 58 | 12 | 1 | 56 | 25 | 11 |
| Culham | 44 | 4 | 5 | 30 | 23 | 43 |
| Winchester | 70 | 26 | 0 | 70 | 55 | 27 |
| York | 70 | 0 | 0 | 68 | 51 | 41 |

GENERAL CONVENERS OF SECTIONS FOR 1930-31.

Art.—Mrs. FOUND (Furzedown).

Domestic Subjects.—Miss WELDHEEN (National Society's College, Berridge House, Fortune Green Road, N.W.6).

English.—Dr. PARSONS (Hull Municipal).

French.—Miss THOMPSON (Derby).

Geography.—Miss E. W. JONES (Warrington, at St. John's College, Battersea, S.W.11).

Handwork and Needlework.—Miss PARSONS (Edge Hill, Liverpool).

History.—Dr. FIRTH (Furzedown).

Hygiene.—Miss CLARKE (Manchester University).

Mathematics.—Mr. E. R. HAMILTON (Bangor University).

Music.—Miss R. M. EDMONDS (Whitelands).

Physical Training.—Miss DAVIES (North Wales, Bangor).

Psychology and Philosophy.—Miss PHILLIPS (Crewe).

Science.—Mr. P. C. HAYWOOD (Chelsea).

ASSOCIATION OFFICERS AND COUNCIL MEMBERS FOR 1930.

| | | |
|--------------------------------|-------|--|
| <i>President</i> | .. .. | Dr. H. E. J. CURZON, Goldsmiths' College. |
| <i>Vice-President</i> | .. | Miss PAINE, City Training College, Leeds. |
| <i>Ex-President</i> | .. | Miss MAY, Neville's Cross College. |
| <i>Hon. Treasurer</i> | .. | Lieut.-Col. DOUGLAS, Saltley College, Birmingham. |
| <i>Editor of the " Forum "</i> | | Professor VALENTINE, Birmingham University. |
| <i>Secretary</i> | .. .. | Miss K. B. ANDERSON, Whitelands College, Chelsea, S.W.3. |
| <i>North Western Branch</i> | | Mr. LEWIS (Crewe). Miss GILL (North Wales, Bangor). Miss HOLCROFT (Mount Pleasant, Liverpool). |
| <i>North Eastern Branch</i> | | Mr. WELPTON (Leeds University). Miss CARDER (Leeds City). |
| <i>Midland Branch</i> | .. | Miss STEWART (Lincoln). Rev. F. T. COOPER (Saltley). Mr. A. E. CHAPMAN (Birmingham University). |
| <i>Eastern Branch</i> | .. | Miss WRAGGE (Peterborough). Miss CARLESS (Homerton). |
| <i>Southern Branch</i> | .. | Miss LLOYD EVANS (Furzedown). Dr. FIRTH (Furzedown). Miss RICHARDS (Stockwell). Miss HARTLE (Brighton Municipal). |
| <i>Co-opted Member</i> | .. | Mr. T. P. HOLGATE (Leeds City). |

Dates of Council Meetings for 1930 : February 8th, March 22nd, May 10th, June 21st (York), October 18th, November 22nd.

LIST OF MEMBERS, 1930.

Note re Groups—

- (I) Colleges controlled by or forming part of a University or University College. (IIb) Mixed Colleges provided by Local Education Authorities.
 (IIa) Colleges provided by Local Education Authorities for Men only and Women only. (IIIa) Colleges for Men provided by other Bodies.
 (IIIb) Colleges for Women provided by other Bodies.
 College Correspondents marked *

SECTIONS :

Art, *Art.* Domestic Science, *D.S.* English, *Eng.* French, *Fr.* Geography, *Geog.* Handwork and Needlework, *H.N.* History, *Hist.* Hygiene, *Hy.* Mathematics, *Ma.* Music, *Mu.* Physical Training, *P.T.* Psychology and Philosophy, *Psych.* Science, *Sc.*

NORTH WESTERN BRANCH.

Group I.

Bangor, University College.

Professor Archer, *Hist., Geog., Psych.*

*Mr. E. R. Hamilton, *Ma., Psych.* (3, Craig-y-don Road, Bangor).

Dr. A. Paterson, *Eng., Psych.*
 Miss M. Thomas, *Art, H.N., Psych.*

Liverpool University, Education Department, 22, Abercromby Square, Liverpool.

Professor Campagnac.

*Miss Kermode.

Miss Winchester.

Manchester University, Faculty of Education.

Professor Bompas Smith, *Psych.*

Miss W. S. Clarke, *Hy., Psych.*

Miss Conway, *Eng., Psych.*

Miss Eggar, *Eng., Psych.*

Miss Hindshaw, *Eng., Hist., Psych.*

Mr. Helm, *Hist., Psych.*

*Miss Oppenheimer, *Art. H.N., Psych.*

Miss Start, *Art, H.N., Psych.*

Miss Vaughan, *Fr., Psych.*

Group IIa.

Bangor, Normal College.

Miss Banford, *P.T., Hy.*

Miss Drage, *Sc.*

Miss Evans.

Miss Griffiths, *Psych.*

Miss Hall, *Eng.*

*Miss Nash, *Hy.*

Crewe, Training College.

Mr. R. Delaney (Principal), *Psych.*

Miss Phillips, *Psych.*

Miss Alexander, *P.T., Hy.*

Miss Hutchinson, *Eng.*

Mr. Lewis, *Geog., Ma.*

*Miss Mitchell, *Hist.*

Miss Organe, *H.N., Psych.*

Miss Smith, *Sc., Hy.*

Liverpool, City Technical School for Women, 23, Colquitt Street.

Miss Kemp (Principal), *D.S.*

Liverpool, F. L. Calder College of Domestic Science, 23, Colquitt Street.

*Miss Pepper (Principal), *Psych.*

Miss Concanon, *D.S.*

Miss H. M. Smith, *D.S.*

Miss Wallbank, *D.S.*

Manchester, Training College of Domestic Science, High Street, Chorlton-on-Medlock.

Miss Cook (Principal).

*Miss Huntingdon.

Liverpool, Edge Hill College.

Miss E. M. Smith (Principal).

Miss E. M. Butterworth, *Geog. Psych.*

Miss M. Chadwick, *Ma.*

Miss M. H. Deakin, *Eng., Mu.*

Miss S. E. Fisher, *Psych., H.N.*

Miss J. Hardy, *Hist., Psych.*

*Miss J. A. Jenkins, *Psych.*

Miss S. A. Parsons, *Art. H.N.*

Miss I. Pope, *P.T., Hy.*

Miss B. Sampson, *Eng., Fr.*

Miss S. W. Turnbull, *Sc., Hy.*

Group IIIc.

Bangor, North Wales Training College.

Rev. Canon Fairchild

(Principal).

Miss E. J. Beckett, *Art, Eng.*

Miss M. Davies, *P.T., Hy.*

Miss D. M. Gill, *Hist., Geog.*

Miss V. Howlett, *Psych.*

Miss E. Roberts, *Psych., Mu.*

*Rev. J. Swann, *Sc., Geog.*

Miss M. Williams, *H.N.*

Liverpool, Mount Pleasant College.

Miss Holcroft (Principal),

Psych., Eng.

Miss Barlow, *Psych., Sc.*

*Miss Cowley, *Psych., Geog., Mu.*

Miss Dunlea, *Ma., Hy.*

Miss Murray, *Hy., H.N.*

Miss E. Sampson, *Psych., Eng.*

Miss M. Sampson, *Psych., Eng.*

Miss Speakman, *Eng.*

Miss Taylor, *Geog., Ma.*

Miss Way, *Hy.*

Manchester, Sedgley Park College.

Miss Greene (Principal), *Psych.*

Miss Considine, *Eng., Hy.*

Miss Doherty, *Eng.*

Miss Evans, *Geog.*

*Miss Hogan, *Hist., Ma.*

Miss Knight, *Mu.*

Miss Winstanley, *Psych., Hy.*

Wavertree (Liverpool), "Warrington" College.

Miss H. C. Allen (Principal).

Miss H. Creaser, *Eng., Fr.*

Miss H. Evetts, *Eng.*

Miss M. Gradidge, *H.N.*

Miss A. Halford, *Psych., H.N.*

*Miss M. Hudson, *Hist.*

Miss U. Irons, *Ma.*

Miss W. Jones, *Psych., Geog.*

Miss W. Page, *P.T., Hy.*

Miss M. Redman, *Eng.*

Miss F. Gill, *Art.*

Other Members :

Miss Barrett, *Psych.*, Education Offices, Manchester.

Miss Entwistle, *Ma.*, Levenshulme High School, Manchester.

Miss Knight, *H.N.*, The High School, Dover Street, Manchester.

Miss Johnson, *Sc., Hy.*, The High School, Whalley Range, Manchester.

Miss Ponsonby, *Sc., Hy.*, Central High School, Manchester.

NORTH EASTERN BRANCH.

Group I.

Leeds University, Department of Education :

Professor Strong (Professor of Education).

Miss Blackburn.

Mr. Curtis.

Mr. Monahan.

Miss Newcomb.

*Mr. W. P. Welpton, *Psych.*

Newcastle-upon-Tyne, Armstrong College :

Professor F. Smith (Professor of Education), *Psych.*

*Miss S. Bailes, *Hy.*

Miss E. L. Melville, *Psych.*

Sheffield University, Department of Education :

Professor J. H. Turnbull (Professor of Education).

*Mr. E. R. Bradford.

Miss E. M. King.

Mr. J. R. Thompson.

Mr. W. Vickers.

Group IIa.

Bingley Training College, Yorkshire :

Miss Spalding (Principal), *Hist., Psych., Hy., P.T.*

*Miss H. E. Allison, *Sc., Hy., P.T.*

Miss F. L. Baugh, *Ma., Psych.*

Miss K. I. Bradley, *Eng.*

Miss C. M. Rankine Brown, *Eng., Psych., Hy., P.T.*

Miss M. Comer, *Psych., H.N.*

Miss N. Garry, *Psych., H.N.*

Miss M. Brook-Gwynne, *Eng.*

Miss H. Hughes, *Mu., Psych.*

Miss R. La Touche, *Hy., P.T.*

Miss M. Moore, *Eng.*

Miss F. G. Moss, *Geog.*

Miss C. M. Ryley, *Hist.*

Miss E. R. Smyth, *Hy., P.T.*

Durham, Neville's Cross College.
Miss May (Principal), *Psych., Eng., Fr.*

Miss Benson, *Sc., Geog.*
Miss Bibby, *Psych., H.N., Mu.*

Miss Champ, *Art., H.N.*
*Miss Haywood, *Psych., Eng.*

Miss Lomas, *Ma., Sc.*
Miss Lunan, *Eng.*

Miss Price, *Hist.*

Miss Row, *Hy., P.T.*

Hull, Municipal Training College, Cottingham Road:

Miss Cumberbitch (Principal), *Eng., Psych.*

Miss Bigland, *Hy., P.T.*

Miss Bone, *Hist., H.N., Psych.*

Miss Brew, *Geog.*

Miss Evershed, *Sc., Hy., D.S.*

Miss Lane, *Hist., H.N., Psych.*

Dr. Parsons, *Eng.*

Miss Randell, *Ma., Sc.*

Miss Scott-Moncrieff, *Eng.*

*Miss Sparling, *Eng., Geog., Mu., Psych.*

Leeds, City Training College, Beckett Park:

Dr. J. R. Airey (Principal), *Sc., Ma., Hy., P.T.*

Miss M. E. Paine, *Eng., Psych. Hy., P.T.*

Dr. R. L. Bolton, *Hy., P.T.*

Mrs. Brown, *Ma.*

Miss J. M. Carder, *Psych., Hy., P.T.*

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Mr. T. P. Holgate, *Psych., Sc., Hy., P.T.*

Miss Matzinger, *Psych., H.N.*

Mr. F. Mitchell, *Psych., Hist.*

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*Miss L. G. Preedy, *Eng.*

Miss H. L. C. Rawson, *Psych. Ma.*

Miss N. F. C. Roberts, *Art.*

Mr. J. Stones, *Mu.*

Mr. H. T. Todd, *Sc., Eng.*

Mr. H. Whitehead, *Sc., Hy., P.T.*

Mr. S. Whitham, *Geog.*

Mr. G. E. Wilkinson, *Eng.*

Mr. M. T. Woodhouse, *Psych. Geog.*

Miss D. Wood, *Eng.*

Leeds, Yorkshire Training College of Housecraft, 90, Albion Street.

*Miss Juniper (Principal), *D.S.*
Miss Carver, *D.S.*

Newcastle-upon-Tyne, Kenton Lodge College, Gosforth.

Miss Morton (Principal), *Psych., Hy.*

Miss Aberdein, *Eng.*

Miss Brindley, *Sc., Hy.*

Miss Childs, *Psych., H.N.*

Miss Gilmour, *Eng.*

Miss Heslop, *Geog.*

Miss Rawsthorne, *H.N.*

Miss Richardson, *Hist.*

*Miss Lucker, *Psych.*

Mrs. Wardley Smith, *Ma., Hy.*

Newcastle-upon-Tyne, Training College of Domestic Science, Northumberland Road:

*Miss C. A. Bright (Principal), *Psych., D.S.*

Miss M. Catnach, *D.S.*

Miss I. Curwen, *D.S., Sc.*

Miss M. Williamson, *D.S.*

Sheffield, City Training College:

Miss E. K. Bowker, *Sc.*

Miss C. Buckley, *Psych., Geog.*

Mr. E. J. Bulman.

Miss Hibberson, *Art, H.N.*

Miss H. D. Ironside, *Hy., P.T.*

Miss F. M. Owen, *Hist., Eng., Psych.*

Miss D. Roberts, *Psych., H.N.*

*Miss O. W. Sinclair, *Psych., Eng.*

Sunderland, Training College:

Miss Williamson (Principal), *Hist.*

*Miss Blyth, *Ma., Sc.*

Miss Egdell Taylor, *Psych.*

Miss MacDonald, *Hist.*

Miss Nobbs, *Psych.*

Miss Taylor, *Eng.*

Group IIIa.

York, St. John's College.

Rev. H. Walker (Principal).

Mr. F. A. N. Wilmott, *Psych., Hist.*

*Mr. C. R. Wardle, *Psych., Eng.*

Mr. J. Haworth, *Art, P.T., Psych.*

Mr. J. D. Edgington, *Ma., Psych.*

Mr. H. R. Fuge, *Fr., Psych.*

Mr. H. E. Inman, *Mu., Psych.*

Mr. J. E. Coleclough, *Geog. Eng.*

Group IIIb.

Darlington, Training College:

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Miss Ashdown, *Eng.*

*Miss Ashley, *Psych.*

Miss Dymes, *Eng.*

Miss Fisher, *Mu.*

Miss Garlick, *Hist.*

Miss Grant, *Psych.*

Miss Grenfell, *Ma.*

Miss Henson, *Geog.*

Miss C. G. Thomas, *Sc.*

Miss J. W. Thomas, *Hy., Sc.*

Miss Turner, *Art, H.N.*

Durham, St. Hild's College.

Miss E. C. Christopher (Principal).

Miss G. Hinde, *Hist., Psych.*

Miss W. Hindmarch, *Sc., Psych.*

Miss B. K. McRae, *Eng., Fr., Psych.*

*Miss J. S. Templeton, *Eng., Psych.*

Hull, Roman Catholic Training College, Beverley Road.

Miss O'Hara (Principal).

*Miss Dowling, *Psych.*

Miss Luke, *Hist.*

Miss Sharp, *Geog.*

Newcastle, St. Mary's Training College:

Madame Fincham (Principal), *all sections.*

Miss Barkey, *Ma.*

Miss Guidici, *Art.*

Miss McCartan, *Art.*

*Miss O'Connell, *all sections.*

Ripon, Training College:

Miss Burch, *Psych., Sc., Geog.*

*Miss Buysman, *Eng., Psych.*

Miss Challess, *Fr., Eng., Psych.*

Miss Eliot, *Psych., Hist., Eng.*

Miss Reid, *Art, Psych., Art, H.N.*

Miss Stowe, *Psych., H.N.*

Miss Watson, *Psych., H.N.*

Other Members:

Miss A. Moodie, 23, Street

Lane, Roundhay, Leeds, *Sc*

Dr. A. D'Arcy Chapman,

Education Department,

Eleanor Street, Grimsby,

Psych.

MIDLAND BRANCH.

Group I.

Birmingham University, Department of Education, Edmund Street:

Professor Valentine (Professor of Education), *Psych.*

Mr. A. P. Braddock, *Psych.*

Miss Hammond, *Psych., Ma.*

Mrs. Barnett, *Psych., Ma.*

Miss Buchanan, *Eng.*

Miss Haddesley, *Hy.*

Miss Jebb, *Eng.*

*Dr. J. G. MacGregor, *Hist., Psych.*

Mr. A. E. Chapman, *Psych.*

Mr. E. C. Cull, *Psych., Ma., Sc.*

Bristol University, Department of Education:

Professor H. Wodehouse (Professor of Education), *Psych.*

Miss Whitwill, *Psych.*

Miss Stone, *Hist.*

*Miss Morice, *Eng.* (Address: Royal Fort, Tyndall's Park, Bristol).

Mr. Nicholson, *Psych.*

Nottingham, University College:

Professor H. A. S. Wortley, *Psych.*

Miss A. K. Adam, *H.N.*

Miss E. M. Becket, *Hist.*

Mr. M. M. Lewis, *Eng.*

*Miss A. Moncrieff, *Psych.*

Mr. W. H. Newton, *Ma.*

Miss L. Ward, *Eng.*

Group IIa.

Bath, Training College of Domestic Science:

Miss King (Principal), *D.S.*

Hereford, Training College:

Miss Jennings (Principal), *Fr., Hy., Psych.*

Miss Crosland, *Psych., Hy., P.T.*

*Miss Dodge, *Hist., Geog.*

Miss Fox, *Psych., H.N.*

Miss McCormac, *Eng.*

Miss Mitchell, *Psych., Geog.*

Miss Morris, *P.T.*

Miss Prior, *Ma., H.N.*

Group IIb.*Dudley, Training College :*

*Mr. J. M. Forster (Principal),
Psych.

Miss A. Rudmose Brown, *Eng.*
Miss G. N. Dawson, *Art., H.N.*
Mr. T. Herdman, *Geog., Ma.*
Miss K. Nix-James, *H.N.*
Mr. W. J. Jenkins, *Hist., Eng.*
Mr. F. H. Lee, *Geog., Eng.*
Miss J. Williamson, *Hy., Sc.*

Group IIIa.*Birmingham, Salltley College :*

Rev. F. J. Cooper (Principal).
Mr. W. Burrow.
Capt. J. Chance.
Lt.-Col. W. J. Douglas.
Mr. F. J. Hill.
*Mr. W. I. Price.
Mr. T. W. Sussams.
Mr. S. W. Tiller.
Rev. N. C. White.

Group IIIb.*Birmingham, Selly Park Training College :*

*Miss C. C. Auterson (Principal),
Psych., Sc.
Miss Courtenay, *Eng., Hist.*
Miss O'Brien, *Psych., Eng.*
Miss Sunderland, *Psych., Hy., Mu.*

Bristol, Fishponds Training College :

Rev. J. R. W. Thomas
(Principal).

Cheltenham, St. Mary's College :

Miss A. E. Monk, *Hist., Eng.*
Miss J. Allen, *Eng.*
Miss E. L. Brooks, *Psych.*
Miss A. R. Burgess, *Geog., Ma.*
Miss M. Butterfield, *Sc., Ma.*
Miss M. M. Clarkson, *Psych.*
Miss E. I. Feasey, *Eng.*
Miss K. Haslam, *Hist., Psych.*
Miss E. M. Herbert, *Hy., P.T.*
Miss Perkins, *Art.*
Miss V. K. Perrins, *Mu.*
*Miss H. A. Pringle, *Sc.*
Miss P. M. Tompson, *H.N.*
Miss D. Walker, *Hist.*
Miss G. Winfield, *H.N.*

Derby, Training College :

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Miss Alexander, *Art.*
Miss Battye, *Sc., H.N.*
Miss Benson, *P.T., Hy.*
Miss Braybrooks, *Psych., H.N.*
*Miss Davies, *Hist., Eng.*
Miss Dobson, *Eng., Psych.*
Miss Reith, *Geog., Ma.*
Miss Serjeant, *Psych., H.N.*
Miss Thomson, *Ex., Eng., Psych.*

Lincoln, Training College :

Miss Stewart (Principal), *Hist.*
*Miss Atkinson, *Ma.*
Miss Barlow, *Hist.*
Miss Butcher, *Geog.*
Miss Grillo, *Art., N.H.*

Miss Hirst, *Psych., Eng.*
Miss Marston, *Psych., N.H.*
Miss Salmon, *Mu.*
Miss Snow, *P.T.*
Miss Warden, *Sc.*

Other Members :

Miss Mackintosh, 28, Coleshill
Street, Sutton Coldfield.
Mr. A. W. Foster, School of
Art, Nottingham.
Miss Daly, 58, Friar Gate,
Derby.

EASTERN BRANCH.**Group Ia.***Cambridge University, Training College for Schoolmasters, Warkworth House, Cambridge :*

Mr. Fox (Principal).
*Mr. R. S. Williamson, *Psych.*

Group IIb.*Bedford, Training College :*

Miss Spence (Principal).
Miss Sutcliffe.
*Miss Bradley.
Miss Gyde.
Miss Bright.
Miss Hall.

Bishop's Stortford, Hockerill College :

*Miss Malden (Principal), *Psych.*
Miss Fildes, *Psych.*
Miss Frodsham, *Psych., Eng., Ma.*
Miss Matthewman, *Sc.*
Miss Moncton Jones, *Hist.*
Miss Oldrey, *Fr., Mu.*
Miss Wood, *Eng., Geog.*
Miss Hartley, *Sc.*
Miss Polglase, *P.T., Hy.*
Miss Marshall, *Eng.*

Cambridge, Homerton College :

Miss Allen (Principal), *Psych.*
Miss Bradshaw, *Eng.*
Miss Bright, *Art.*
Miss Carless, *Ma.*
Miss Crooke, *Hy., P.T.*
Miss Delaney, *H.N.*
*Miss Glennie, *Sc.*
Miss Haynes, *Eng.*
Miss Rees, *Hist.*
Miss Smith, *Sc., Psych.*
Miss Waterhouse, *Psych.*

Cambridge, Training College for Women (Post-Graduate), Wollaston Road:

Dr. Mary Wood (Principal).
*Miss Galloway, *Ma., Geog., Sc.*
Miss Neroutsos, *Hist., Fr.*

Norwich, Training College :

Miss Winington Ingram
(Principal), *Eng., Psych.*
Miss Daniel, *Geog., Ma.*
Miss Hall, *Eng., H.N.*
*Miss Hill, *Eng., Psych.*
Miss Hudd, *Sc.*
Miss Oates, *H.N., Psych.*

Saffron Walden Training College, Essex.

Miss Varley (Principal), *Psych.*
Miss Chart, *Psych., E.*
Miss Gibson.
Miss Morgan, *P.T.*
Miss Newton.
Miss Slight, *H.N., Psych.*

SOUTH WALES BRANCH.**Group I.***Cardiff, University College :*

Professor W. Phillips.
Mr. Evan Jones.

Swansea, University College :

Professor F. Cavanagh.
*Mr. Idwall Jones.

Group IIa.*Barry, Training College, Glamorgan :*

Miss E. Evans (Principal).
Miss Blake, *Eng.*
Miss Champion, *Hist.*
Miss Clarke, *Art.*
Miss Davies.
Miss Hamilton, *Sc.*
*Miss Lett, *Psych.*
Miss Philpott, *Psych.*
Miss Powell, *Sc.*

Newport, Caerleon Training College, Monmouthshire :

Mr. Ivor B. John (Principal).
Mr. C. Brown, *Sc.*
Mr. D. G. Davies, *Ma.*
Mr. J. Gabriel, *Hist.*
Mr. W. M. Lewis, *Mu.*
Mr. J. Owen, *Psych.*
*Mr. T. J. Webley, *Eng., Psych.*
Mr. L. Wright, *H.N., Hy., P.T.*

Swansea, Training College :

Miss Robbins (Principal),
Psych.
*Miss Hewlett, *Psych.*
Miss Hughes, *Eng.*
Miss James, *P.T.*
Miss Jeffery, *Art., H.N.*
Miss Morgan.
Miss Newton, *Psych.*
Miss Rowland, *Ma.*
Miss Salmon, *Hist.*
Miss Sowerbutts, *Sc.*
Miss Taylor, *Eng.*
Miss Williams, *Mu.*

Group IIIa.

Rev. Canon Parry (Principal).
*Rev. T. Halliwell, *Eng.*

SOUTHERN BRANCH.*London Day Training College, Southampton Row, W.C.1 :*

Professor Sir T. Percy Nunn
(Principal), *Psych.*
Mr. Bell, *Hist.*
Mr. Browne, *Sc.*
Professor Burt, *Psych.*
Miss Calthrop, *Fr.*
Mr. J. Fairgrieve, *Geog.*
Dr. Gurrey, *Eng.*
*Miss M. Punnett, *Ma.*
Miss von Wyss, *Art, Sc.*

London, King's College, Strand, W.C.2.

Professor J. Dover Wilson,
Eng., Psych.
Mrs. N. Sykes, *Psych.*

London, Goldsmiths' College:

Mr. A. E. Dean (Warden).
 Miss Graveson, *Psych.*
 Mr. Raven.
 Miss M. K. Ashby, *Psych.*
 Miss K. Bunnell, *H.N.*
 Miss M. G. Carter, *Hy.*
 Miss D. C. Chaplin, *Psych.*
 Miss Z. V. Craies.
 Dr. H. E. J. Curzon, *Ma.*
 Miss L. Davies, *Eng.*
 Miss M. G. Davies, *Mu.*
 Miss D. Dymond, *Hist.*
 Mr. E. Fitzgerald, *Sc.*
 Miss D. M. Forsaith, *Geog.*
 Mr. J. Kay.
 Mrs. J. Kellett, *Eng.*
 Miss I. M. Larter, *P.T.*
 *Mr. B. E. Lawrence, *Ma.*
 Miss M. Pocock, *Art.*
 Mr. W. Rees, *Eng.*
 Mr. E. Ridout, *Hist.*
 Mr. T. S. Rimmer, *H.N.*
 Miss W. H. Saunders, *Sc.*
 Miss B. Shaw, *H.N.*
 Miss D. Snow, *Art.*
 Miss M. Storr, *Psych.*
 Mr. J. Wims, *Psych., Hy.*
 Miss C. M. Wise.
 Mr. F. H. Woollaston.
 Miss Holt.

London, Maria Grey Training College, Salusbury Road, N.W.6:

Miss K. L. Johnston (Principal)
 Miss D. Butterworth.
 Miss F. Butterworth.
 Miss Collier.
 Miss Kenwick.
 Miss Meiklejohn.
 Miss Shove.
 Mrs. Steppat.
 Miss Venour.
 *Miss Woodham Smith.
 Miss E. Price.
 Miss Wheeler, *P.T.*

Oxford University:

F. J. R. Hendy, Esq., 15,
 Norham Gardens.

Reading University, Department for the Training of Teachers:

*Mr. H. S. Cooke (Head of Department).
 Miss Campbell.
 Mr. J. A. Glason.
 Mr. W. F. Mitchell.

Southampton, University College:

Professor A. A. Cock (Professor of Education).
 *Miss E. M. Ricks.
 Mrs. Lowe.
 Miss Hales, *Eng.*

Group IIa.*Brighton, Municipal Training College, 8, Eastern Terrace.*

Miss Hartle (Principal), *Sc., Psych.*
 Miss Barrett, *Geog., H.N.*
 Miss Elliott, *Mu.*
 Miss Jackson, *Hy., P.T.*
 Miss Leopold, *Psych.*
 Miss Lathom, *Hist.*
 *Miss Muscott, *Eng., Fr.*
 Mrs. Wilson, *Ma., Sc.*

London, Avery Hill College, Eltham, S.E.9:

Miss Hawtrey (Principal), *all sections.*
 Miss Bartlett, *Eng., Psych.*
 Miss Emerson, *Hy., P.T.*
 Miss Exton, *Ma.*
 Miss Fraser, *Fr., Eng.*
 *Miss Hearn, *Psych., H.N.*
 Miss Jones, *H.N.*
 Mrs. Kittson, *Eng.*
 Miss Ottley, *Hist.*
 Miss Payne, *Art, H.N.*
 Miss Phillips, *Geog.*
 Miss Pitchford, *Hy., Sc.*
 Miss Simpson, *Eng.*
 Miss Spalding, *Mu.*
 Miss Stanton, *Ma., Sc.*
 Miss N. G. R. Taylor, *Psych.*
 Miss Carrier, *Geog.*

London, Furzedown College,

Welham Road, S.W.17:

Miss Lloyd Evans (Principal).
 Dr. Firth, *Hist.*
 Mrs. Found, *Art.*
 Miss Holt, *Psych.*
 Miss Middlemast, *Eng.*
 Miss Nunn, *Hist., Psych.*
 Dr. Reaney, *Hy., Sc., Psych.*
 Miss Robins, *Ma.*
 Dr. Saunders, *Geog.*
 Mrs. Temple Saville, *Mu.*
 Miss Silsby, *Psych.*
 *Miss Terry, *Eng.*
 Miss Wallace, *Geog., Sc.*
 Dr. Wells, *Psych.*

London, Graystone Place College, Fetter Lane, E.C.4:

Miss Brackenbury (Principal).
 Miss Bowerley, *Ma., Psych.*
 Miss Cox, *Sc.*
 Miss Gillmark, *Art.*
 Miss Hume, *Psych., H.N.*
 *Miss Dodd, *Hist.*
 Miss Nicolson, *Eng.*
 Miss Salt, *Psych.*
 Miss Trayler, *Psych.*
 Miss Skett, *Mu.*

Portsmouth, Municipal Training College:

Miss E. L. White (Principal), *Eng.*
 Miss Barber, *Sc.*
 *Miss E. Daley, *Psych.*
 Miss Newbigin, *Hist.*
 Miss Opie, *Psych.*
 Miss Palmer, *Fr., Eng.*
 Miss Sears, *Geog.*

Group IIIa.*Culham, Training College, Abingdon:*

Rev. Canon Whitham (Principal).

Exeter, St. Luke's College:

*Mr. E. Arnold.
 Mr. Bright.
 Mr. Thoday.
 Mr. J. S. Lock, *Eng., Psych.*

Isleworth, Borough Road Training College, Middlesex:

Mr. F. L. Attenborough (Principal).
 Mr. Cryer.
 Mr. Jennings.
 Mr. Liversage.
 Mr. Miller.
 Mr. Peaker.
 Mr. Woollett.

London, College of St. Mark and St. John, Chelsea, S.W.10:

Rev. Dr. Dix (Principal).
 Mr. Bromage.
 Mr. Blake.
 Dr. Garrad.
 Mr. Grant.
 Mr. Haywood.
 Mr. Hewitt.
 Rev. L. Riley.
 Mr. Reddick.
 Mr. Squires.
 *Mr. C. H. Swann.
 Mr. Thomas.

Strawberry Hill, St. Mary's Training College, Middlesex:

Rev. Dr. Doyle.
 Dr. Doolan.
 Dr. Dowling.
 Rev. Casey.
 Rev. McCarthy.
 *Mr. G. E. Mahon.
 Rev. J. Thompson.

Winchester, King Alfred's College:

Mr. R. W. Burfitt, *Ma., Sc.*
 *Mr. H. W. Jarman, *Sc., Hist., Geog.*

Group IIIb.*Brighton, Diocesan Training College, Ditchling Road:*

Miss Day (Principal).
 Miss Avery, *Eng.*
 Miss Bell, *Mu.*
 Miss Bosward, *H.N., Psych.*
 Miss Brackenbury, *Eng., P.T., Hy.*
 Miss Chambers, *Hy., Sc.*
 *Miss Hopkins, *Geog., Eng.*
 Miss Lucas, *Eng.*
 Miss McRae, *Geog., Ma.*
 Mrs. Meads, *Psych.*
 Miss Sawyer, *Art.*
 Miss Thompson, *Hist., Psych.*

Chichester, Bishop Otter College:

Miss Johnson (Principal).
 Miss Edminson, *Eng.*
 *Miss Forbes, *P.T.*
 Miss Howell, *Geog.*
 Miss Munro, *Sc.*
 Miss Wakefield, *Psych.*

Dartford Heath, Bergmann Osterberg Physical Training College, Kent:

Miss Arnold, *P.T.*
 Miss Doman, *P.T.*
 Miss Drummond, *P.T.*
 Miss Jarvis, *P.T.*
 Miss Spalding, *P.T.*

London, The Catholic Training College, 11, Cavendish Square, W.1:

Miss O'Connor, *Psych., Hist.*
 *Miss M. Bisgood, *Eng., Fr.*
 Miss Measures.

London, Froebel Institute, Roehampton Lane, S.W.15:

*Miss Lawrence (Principal).
 Miss Garnett.
 Miss Lulham.

London, Gipsy Hill Training College, 44, The Avenue, S.E.19 :

Miss de Lissa (Principal),
Psych.
Miss Kear, *Eng.*
Miss Keen, *Art.*
Miss Jackson, *Psych.*
*Miss Litchfield, *Psych.*
Miss C. Pugh, *Sc.*

London, National Society's Training College for Domestic Subjects, Berridge House, Fortune Green Road, N.W.6 :
Miss Maughan (Principal),
D.S.

Mrs. Clark, *D.S.*
Miss Hobson, *D.S.*
Miss Mumford, *D.S., Psych.*
*Miss Welhen, *D.S., Sc., Hy.*
Miss Young, *D.S., Psych.*

London, National Training College of Cookery and Domestic Subjects, Westminster, S.W.1 :

*Miss E. G. Clarke, *D.S.*
Miss Caddow, *D.S.*
Miss Plummer, *Psych., D.S.*
Miss Shaw, *D.S.*
Miss Underhill, *D.S.*

London, St. Charles's College, St. Charles Square, W.10 :
Madame Monahan, *Psych., Eng.*

Miss Ashlin, *Geog.*
Miss Hicks Bolton, *Hist.*
*Madame McVeigh.
Miss Simmons, *Art, H.N.*
Miss Taylor, *Ma., Sc.*

London, St. Gabriel's College, Cormont Road, S.E.5 :

Miss K. T. Stephenson (Principal), *Eng.*
Miss Abbott, *Hist.*
Miss Hele, *Psych., Hist.*
*Miss Swinburn, *Eng.*
Miss Pearson.

London, St. Katharine's College, Tottenham, N.17 :

Miss Gowan (Principal),
Psych.
Miss Bax, *Eng.*
Miss Chubb, *Mu.*
Miss Clarke, *Art.*
*Miss Clout, *Eng., Hy.*
Miss Creed.
Miss Glen Bott, *Sc.*
Miss Nickal, *Psych.*
Rev. E. M. Radford, *Ma.*
Miss Roberts, *Hy., P.T.*

Miss Southern, *H.N.*
Miss Ward, *Geog.*

London, Southlands College, Belmont, Parkside, S.W.19 :

Miss Brunyate (Principal),
Ma., Psych.
Miss Cole, *Psych.*
*Miss Hargreaves, *Psych.*
Miss Newton.

London, Stockwell College, Stockwell Road, S.W.9 :

Miss Richards (Principal),
Eng.
Miss Angell, *Hy., Sc.*
Miss Baldwin, *Eng., Psych.*
Miss Bloor, *Ma., Psych.*
Miss Heaton, *Sc.*
*Miss Ward, *Hist.*
Miss Wilford, *Geog.*

London, Whitelands College, Chelsea, S.W.3 :

Miss Mercier (Principal), *Hist., Psych.*
Miss Battley, *P.T.*
Miss Counsell, *Sc.*
Miss Custance, *H.N., Hy.*
Miss Edmonds, *Mu.*
Miss Ivatt, *Eng.*
Miss King, *Eng.*
*Miss Mackenzie, *H.N., P.T.*
Miss Miles, *Geog.*
Miss Moore, *Psych, H.N.*
Miss Murton, *Art, H.N.*
Miss Noakes, *Psych.*
Miss Sharp, *Art, H.N.*
Miss Stimson, *Ma.*

Salisbury, Training College :

Miss Dunn (Principal), *Psych., Hy., Mu.*
*Miss Allen, *Geog., Psych.*
Miss Elliott-Smith, *H.N., Psych.*
Miss Fowler, *Eng., Fr., Psych.*
Miss Grist, *Hist., Psych.*
Dr. E. Smith, *Hist.*
Miss M. Smith, *H.N.*
Miss Stevenson, *Ma., Sc.*
Miss Thorp, *Eng.*
*Miss Woodman, *Hy., P.T.*

Southampton, Avenue College.

Madame O'Doherty (Principal)
Miss Glover, *Eng.*
Miss Mason, *Hy., Sc.*
Miss Mullany, *Hist., Geog.*
Miss Murphy, *Eng., Mu.*
Miss Normoyle, *Eng., Psych.*
Miss Worrall, *Ma., Geog.*

Truro, Training College :

Miss Pedder (Principal).
Miss Dingad Davies.
Miss Graham Brown.
Miss Light.
Miss Matzinger.
*Miss Noble
Miss Rodgers.
Miss Rogers.

Other Members :

Sir John Adams, 625, Alexandria Avenue, Los Angeles, Cal.
(Hon.) Miss Denning, Whitelands College, Chelsea, S.W.3
Miss Frodsham, Redthorn, Broxbourn Road, Orpington Kent.
(Hon.) Major Griffiths, c/o Barclay's Bank, St. John's Hill, S.W.11.
(Hon.) Rev. R. Hudson, 34, Egmont Road, Sutton, Surrey.
Miss Kelleher, Lyceum Club, Piccadilly, W.1.
Dr. MacFarlane, 23 B, North Hill, Highgate, N.5.
(Hon.) Mr. R. G. Mayor, 36, Campden Hill Gardens, W.8.
Mr. F. Roscoe, Royal Society of Teachers, 47, Bedford Square, W.C.1.
Miss Swanson, 23, Bellevue Crescent, Ayr, N.B.
Mr. H. Ward, 6, Woodland Rise, Muswell Hill, N.10.
Miss Wheeler, Orchard Corner, Westmount Road, S.E.9.
Mr. T. Rayment, Yewhedge, Forest Row, Sussex.
Miss Pearse, 21, Ruskin Walk, S.E.24.
Miss Catty, 40, Albert Palace Mansions, S.W.11.
Miss L. M. Burt, Annandale, North End Road, N.W.11.
Miss Meek, Norland Institute, 10, Pembridge Square, W.11
Miss Stairmand, 24, Swinburn Road, Darlington.
(Assoc.) Miss Walmsley, 138, Oak Tree Lane, Selly Oak, Birmingham.

The Training College Bulletin

Edited on behalf of the

TRAINING COLLEGE ASSOCIATION

by

*The SECRETARY and Lt.-Col. W. J. DOUGLAS,
Saltley College, Birmingham.*

No. 23

JUNE, 1930

MEETING OF THE COUNCIL. Held on Saturday, February 8th, 1930.

The Secretary reported that Mr. Raymont had consented to serve on the Committee appointed to meet the Directors and Secretaries for Education. Dr. Curzon had consented to take Miss May's place on the Central Council for School Broadcasting, and the B.B.C. had asked that this appointment might remain without change until the end of the three-year experimental period. The Council agreed to the arrangement.

The New Education Fellowship had asked the T.C.A. to become a subscribing member of the Fellowship. It was agreed to send a donation of £2 2s. towards the expenses of the Examinations Sub-Committee, on which the T.C.A. was represented by Dr. Curzon, but not to become a subscribing member of the Fellowship.

A circular from the Board of Education in regard to the admission of additional students to training colleges was read. It was asked whether there was any general practice in colleges taking extra students of making some corresponding addition in staff. Members of the Council were asked to report any outstanding anomalies in this respect to the Secretary.

The North-Eastern Branch had invited the Council to hold its summer meeting in York, and to join in the meeting of the Branch on June 21st. The Secretary was instructed to express the thanks of the Council to the North-Eastern Branch, and to accept the invitation.

The Education Committee.

Miss Paine reported. The Committee had met that morning and transacted the following business :

The Secretary had reported that the Branches had considered the T.C.A. policy in regard to demonstration schools. No change of policy from that already expressed by the T.C.A. and N.U.T. had been made officially. There was general agreement that paragraph 22 (d) in the old regulations for the training of teachers should be included expressly in the new regulations. The matter was referred to the Tripartite Committee.

The following resolution from the English Section had been considered :

"In the opinion of this (Section) meeting it is desirable that (while the greatest measure of freedom in the choice of syllabuses should be secured to all colleges) some means should be taken to secure a general equality of standard as between the different areas throughout the country in awarding examination results."

It was agreed to forward this resolution to the Central Advisory Committee now in process of formation.

The following resolution had been received from the Physical Training Section :

- (1) "That the area external examiners in Physical Training (a) should be appointed on the recommendation and vote of the area internal examiners,

and that (b) in order to standardize the results of the Physical Training theory examination, they should form a panel which should meet to discuss and keep a uniform standard throughout the areas."

- (2) "That it should, in all areas, be possible for a student to gain (in addition to the distinction in Physical Training and Hygiene) a credit mark in Physical Training only or in Hygiene only, provided that in Physical Training the student reaches a credit standard in theory and at least a B+ mark in the Physical Training examination in Practical Teaching."

The Committee considered these resolutions and made the following amendment to part (a) to read:

"That recommendations for the appointment of external examiners should be sent forward by the area Boards of Studies."

It was agreed that this amendment be sent to the Physical Training Section for approval, and then forwarded in due course to the Central Advisory Committee. It was agreed to ask the Central Advisory Committee to consider the question of the credit in Physical Training.

Certain resolutions had been received from the N.U.W.T. Conference and were approved.

The Education Committee's report was adopted and its recommendations approved.

Conditions of Service Committee.

Mr. Holgate reported on cases which had been dealt with since the last meeting of the Council. No action by the Council was called for.

Conference with the Head Mistresses Association.

The Secretary reported that it was customary at this time of year to hold a conference with the Head Mistresses' Association jointly with the Council of Principals. The following suggestions had been made for the agenda:

- (1) Supply of teachers.
- (2) Third Year Courses.

Miss Richards had kindly invited the conference to Stockwell College on the afternoon of March 14th.

League of Nations Union.

The Secretary reported that she had attended a meeting of the League of Nations Union on behalf of the T.C.A. during the January conference. At this meeting it had been urged that the joint declaration of educational associations, published under the title "Education and the League of Nations," should be disseminated in schools and colleges as widely as possible. The Secretary was instructed to furnish College Correspondents with copies.

Central Advisory Committee on Universities and Training Colleges.

The Board of Education had asked that four representatives be appointed by the Joint Standing Committee of the T.C.A. and C. of P. It was agreed to nominate Mr. Holgate and Miss Lloyd Evans from the T.C.A.

T.C.A. Sections.

Mr. Whelpton asked if the Council were aware that some sections of the T.C.A. were very much more active than others, and expressed the view that a closer connection between the Council and the sections should be established. The matter was referred to the Finance and General Purposes Committee.

MEETING OF THE COUNCIL. Held on Saturday, March 22nd, 1930.

The Secretary reported :

(a) That the Council amendments to the resolutions from the Physical Training Section considered at the last meeting had been accepted by the section and the resolutions as amended could now be sent to the Central Advisory Committee.

(b) Further correspondence had been carried on with the British Psychological Society in regard to the possible amalgamation of the *Forum of Education* with a proposed new *Journal of Educational Psychology*. It was suggested that a joint committee of enquiry be appointed, and Dr. Curzon, Lieutenant-Colonel Douglas, Professor Valentine, and Mr. Chapman were appointed to represent the T.C.A., with reference to report on the estimated finance, management, and formation of the proposed new journal.

(c) Further correspondence in regard to the suggested revision of the Syllabus in Psychology for two-year colleges (issued two years ago) was referred to the Psychology Section.

(d) A joint letter from the T.C.A. and N.U.T. had been sent to the Board of Education expressing satisfaction at the issue of Administrative Memorandum No. 75.

Finance and General Purposes Committee.

Mr. Whelpton reported that the Finance and General Purposes Committee had met on the previous evening to consider ways of promoting a closer connection between the Council and the sections. The Committee recommended that a *Committee on Sections* be appointed by the Education Committee, with the Chairman of the Education Committee as Chairman, and at least two other members of the Education Committee and all the General Conveners of Sections as members; this Committee to meet always before the summer vacation

and inform itself of the plans of each section.

This recommendation was agreed, and the Council went into committee on education to appoint the members. Mr. Whelpton and Miss Carder were appointed, with Miss Paine (Chairman of the Education Committee) as Chairman.

Conditions of Service Committee.

Mr. Holgate reported that the Committee had met on the previous evening. Difficulties at present existing in two different training colleges were discussed, and it was agreed to take action in one case with the governing body, and in the other with the Board of Education. The Council approved the Committee's suggestions, and asked for a further report at the next meeting.

Tripartite Committee.

The minutes of the last meeting were read and adopted. Arising out of the minutes the Secretary reported that a questionnaire in preparation for a memorandum on third year and other courses had been sent to principals and heads of training departments.

Association of Directors and Secretaries for Education.

The Secretary reported that a meeting with the Association of Directors and Secretaries had been held on the previous afternoon. The T.C.A. had been represented by Dr. Curzon, Miss Paine, Miss May, Mr. Holgate, and Miss Lloyd Evans. The Committee has been occupied with the consideration of a document on the subject of the staffing of senior schools submitted by the Association of Directors and Secretaries. This document was at present confidential, and a further report would be made to a later meeting, when the Committee had completed its consideration.

It was recommended by the Joint Standing Committee, with the Council of Principals, which had met on the previous evening, that the subject of demonstration schools should be raised with the Association of Directors and Secretaries in order that the interest of Local Education Authorities in this matter might be stimulated. It was recommended that a short memorandum on the subject should be drawn up and sent to members of that Association appointed to meet the T.C.A. and C. of P., and that similar action be taken in regard to the subject

of supply of teachers. The Secretary was instructed, on the recommendation of the Committee, to draw up the former, and the Council agreed that Miss Richards and Mr. Dean should be asked to write the latter.

Geneva Conference.

The Secretary reported that the Association had been circularized in regard to the Conference at Geneva, from July 27th to August 8th, and urged the desirability of making early application for accommodation.

MEETING OF THE COUNCIL. Held on Saturday, May 10th, 1930.

The Secretary reported that Miss Bowen, late of the Home and Colonial Training College, had now been appointed to a permanent post on the staff of Lincoln Training College. Only one member of the Home and Colonial Training College was now without an appointment.

Dr. Reaney's term of office as T.C.A. representative on the *National Playing Fields Association Council* had expired. Dr. Reaney was willing to continue in office, and it was agreed to ask her to do so.

A letter had been received from the *British National Committee of Intellectual Co-operation*, enclosing a copy of resolutions to be submitted to a conference on the interchange of teachers to be held at the Board of Education on May 22nd, and asking for one representative to be sent from the T.C.A. Dr. Curzon was asked to attend.

A communication had been received from the *Deutsche-Englische Akademische Vermittlungsstelle* asking the T.C.A. to send a representative to the forthcoming *International Hygiene Exhibition in Dresden* from June 5th—18th. The matter was referred to the General Convener of the Hygiene Section.

A communication had been received from the *National Froebel Union* pointing out that the scope of the syllabuses and examinations of the N.F.U. covers the education of children up to the age of 12 years. As this fact was well known to the Council the letter was left on the table.

A letter had been received from the *Secretary of the Education Committee of the National Union of Teachers* suggesting that a small deputation, consisting of one member each from the N.U.T., T.C.A., and C. of P., should wait upon the Board of Education on the subject of *Demonstration Schools*. It had been suggested by the T.C.A. Secretary that this should be postponed until after the meeting of the T.C.A. and C. of P. with the Association of Directors and Secretaries in order, if possible, to secure the co-operation of the latter body, but as this meeting had been postponed indefinitely the former suggestion was accepted. Dr. Curzon was appointed to attend on behalf of the T.C.A. It was further agreed in this connection that while adhering to the statement issued on this subject in 1926 it should be mentioned that a strong minority in the T.C.A. was opposed to the principle of extra payments to the

staff of demonstration schools *ipso facto*. The Secretary was asked to communicate with the Secretary of the N.U.T. Education Committee as soon as the C. of P. representative had been appointed.

The President reported that he had received a letter from the secretary of the *National Institute of Industrial Psychology*, inviting the co-operation of the T.C.A. in the work of the National Institute by the distribution of literature and by inviting speakers to meetings. The Council were of opinion that this connection would be a valuable one, and the Secretary was asked to visit the Secretary of the National Institute and to explore methods of co-operation, in particular to ask for a speaker for the Annual General Meeting in January, and for literature for distribution.

New Education Fellowship. Examinations Enquiry Committee.

The President reported that he had represented the T.C.A. upon this Committee. A report was shortly being issued. The policy which he advocated upon the Committee was that teachers themselves should have as much voice as possible in the drawing up of syllabuses, and setting and correcting of examinations. Miss Richards hoped that this would not lead to over examinationizing, but was assured by Dr. Curzon that the policy of the Fellowship was to eliminate examinations as far as possible. Dr. Curzon's policy was approved.

Treasurer's Report.

The Treasurer reported a balance of £332 6s. 4d. This was less than the corresponding balance last year. The Secretary was asked to send out a further reminder about overdue subscriptions.

Committee on Sections.

The Secretary reported that the General Section Conveners had been informed of the establishment of the Committee. It was agreed to summon a meeting in Leeds on June 14th. It was agreed to ask Conveners to send deputies if they were unable to attend in person, the deputy to be a member of the appropriate section.

Meeting with the Association of Directors and Secretaries for Education.

The Association of Directors and Secretaries had been obliged to ask that this meeting should be postponed as, owing to the obscurity of the political situation in regard to the passing of the Education Bill and School Attendance Bill, it was impossible for their members to arrange any other meetings than those dealing with the present national position.

Religious Education Committee.

Miss Richards (Chairman), reported as follows: The Committee had met on the previous afternoon and had revised the proof of the new edition of the book list. It was recommended that this be sent to Local Education Authorities, Diocesan Education Committees, and Principals of Training Colleges. The Committee had been asked to give its opinion on the possible publication of an edition of Peake's "Commentary," adapted to the special needs of teachers of children. The Committee were favourably disposed towards such a publication, and members of the T.C.A. Council having views to express on the matter were asked to communicate them in writing to Miss Day, Diocesan Training College, Brighton, who would communicate with the intending publisher.

The report was adopted.

Conditions of Service Matters.

In the absence of Mr. Holgate the Secretary reported that information had been given in two cases in regard to pension.

Further information had been given to the staff and governors of a resident training college, and at a recent meeting of the governing body more satisfactory arrangements for the resident staff had been made.

Miss Paine reported on negotiations with the Board in regard to conditions attaching to a certain training college appointment.

Statement on Third Year and other Additional Courses.

The Secretary reported that most of the information was now in hand, and that a draft of the statement would be submitted to Council members before the next meeting of the Council. She asked the permission of the Council to ask Miss Mercier to write an introduction. This was agreed.

Office for the T.C.A.

The Secretary explained that owing to the two facts that Whitelands College was removing from central London, and that she personally was no longer on the staff of the college, it would not be convenient for the T.C.A. to have an office at Whitelands after the end of the present term.

If the Council agreed, the Secretary would be very pleased to house the office of the T.C.A. in her chambers next spring, but a temporary address was needed for the intervening six months. Mr. R. B. Anderson had offered to provide an address for the T.C.A. at his chambers during this period.

This offer was accepted, and the Secretary was instructed to express the thanks of the Council to Mr. R. B. Anderson. The Secretary was also asked to express to Miss Mercier and the authorities at Whitelands College the gratitude of the Association for the hospitality that had been extended to it over a long period. After the end of July, 1930, until further notice, the official address of the T.C.A. would be : 5, Westminster Chambers, Victoria Street, London, S.W.1.

Forum of Education.

Mr. Chapman reported on a meeting of the Joint Committee of the T.C.A. and the Education Section of the British Psychological Society in regard to the proposed establishment of a new journal to be published jointly by the two Associations. The recommendations of the Committee were approved. (A special report on this matter will be issued to every member of the Association in due course.)

SECTION REPORTS, 1929.

Geography.

The general meeting of the Section was held at University College, London. The Convener for 1928 (Miss E. W. Jones) and five other members were present. The business discussed included :

- (1) The formation of the Standing Committee of the Geographical Association to represent Training Colleges. This Standing Committee came into existence during 1928 to make closer

the contact of the Geographical Association with geography lecturers in training colleges.

- (2) Branch Reports. — Only the North-Western Branch had any series of meetings to report. Branches attributed difficulties in organizing meetings to the new grouping with the universities.
- (3) Discussion of schemes with a very definite vocational bias for students taking the ordinary course.

- (4) Discussion of the difficulty of the clash of the sectional meeting with important meetings of the Geographical Association.

During the year Mr. Herdman acted as Convener of the Section and Chairman of the Standing Committee of the Geographical Association. This strengthened the contact with the Geographical Association, and it was possible to arrange for an important joint meeting in January, 1930.

In January, 1930, a joint meeting was held with members of the Primary Schools Standing Committee of the Geographical Association. An interesting discussion took place upon the relation of training college geography to the primary school. The joint meeting was well attended by members of both primary schools and training colleges.

The annual business meeting was held at London Day Training College, when eight members were present. The business of the meeting was the discussion of examination schemes under the new Regional Boards of studies. Reports were made by four groups.

Handwork and Needlework.

General Meeting, January 8th, 1929. After discussion concerning the award of the mark for handwork and needlework in the final examination, the final resolution was "That the general teaching mark should not be considered in awarding credits." It was suggested that a bibliography on the teaching of handwork and needlework should be drawn up. The Convener undertook to make enquiries in the matter.

An address was given by Mr. C. A. Chadwick, Handwork Organizer for Cambridgeshire, on "Handwork for Rural Schools."

The North-Eastern Branch Section held one meeting to discuss the question of "External Examiners and

the Conduct of the Future Examinations in Areas I and II." Experiences were exchanged between the members of the Section as to the arrangements that were being made in both areas, that of Yorkshire and that of Northumberland and Durham.

During the year the members of the North-Western Branch Section have met to discuss different types of handwork teaching in the various colleges. At one meeting Miss Organe organized an exhibition of Chinese needlework. At another Miss Fisher (Edge Hill, Liverpool) showed specimens of students' woodwork and other handwork. During this year the Board of Education has continued to examine needlework and handwork.

Mathematics.

The Section was chiefly occupied during 1929 in discussing the draft pamphlet on "Mathematical Work in Training Colleges," which was published in the TRAINING COLLEGE BULLETIN last November. Copies of the reprint of this are still available and may be had from me. Some attention was also given at Branch meetings to the syllabuses in mathematics approved by the new Boards of Studies.

The activities of the Section are increasing in number, and a good deal of work is being done during this year (1930) which will be reported at the next annual meeting.

English.

A general meeting of the English Section was held at University College, London, on January 3rd, 1929. Dr. Parsons took the chair.

The meeting discussed a proposal that the new syllabuses in English now in use in the various training colleges should be published in the *Forum*, but finally decided that it would be wiser to postpone this until the transition period in examining is over.

The meeting next dealt with suggestions concerning the English essay paper, and passed the following resolution :

"That in the Ordinary Course paper, the essay ought to include such a width of subjects that some give opportunities for descriptive or narrative treatment."

The activities of the branches of the English Section during the past year have been mainly connected with the new examinations scheme. Two Branches did not reply to the request for a report on the year's activities, but in the remaining Branches, the following are typical of the subjects discussed :

The English syllabuses ;

The form of the examination, especially the Language paper and the essay ;

Poetry appreciation in schools ;

The relationship between Literature and other Arts ;

Speech training.

The other event of importance in the year is the publication in the June *Forum* of the "Memorandum on the Work in English in Training Colleges" by the Sub-Committee of the English Section of the T.C.A.

Philosophy and Psychology.

At the annual meeting of the Section, on January 3rd, 1929, the following topics were discussed :

(1) The new syllabuses.

(2) The place in the syllabus of
(a) experimental work ; (b) history of education ; (c) Philosophy other than psychology.

(3) Co-operation with other (subject) members of staff.

Activity in the Branches during the year has been mainly concerned with questions arising out of the new university examination and connection. Two Branches, the Midland and the North-Western, have begun work on certain aspects of mental testing, and it is hoped that work on related lines may be undertaken during the year. Among the problems requiring investigation are the following :

(a) With children of 11+ :

(1) Mental testing as a guide to the allocation of children to various types of modern schools.

(2) The problem of types, as well as of degrees of intelligence among children of this age.

(3) The various types of test set to children of this age by Local Authorities ; the uses to which these tests are in practice put and their effects on methods of teaching.

(4) The most suitable form of test for the selection of candidates for higher post primary education.

(b) With students in training :

(1) The relation of mental test performances to professional attainment among students.

(2) The possibility of working out some means of predicting teaching success in those who have as yet done little teaching.

(3) The problem of mental types among students.

ERROR IN THE MEMBERSHIP LIST PUBLISHED IN THE FEBRUARY NUMBER OF THE BULLETIN.

The Secretary very much regrets that St. Peter's College, Peterborough, was omitted from the List of Members. The membership at the College is as follows :

Peterborough, St. Peter's College.

Miss Rowell (Principal), *Ma.*

Miss Jeffries Davis, *Sc., Hy.*

Miss Fatherley, *Psych.*

Mrs. Harvey, *Sc.*

Miss Howlett, *D., H.N.*

Miss Irons, *Ma.*

Miss Johnson, *Hy.*

Miss Pearson, *Psych., H.N.*

Miss Warren.

Miss Wragge, *H.*

CONFERENCE BETWEEN THE HEAD MISTRESSES' ASSOCIATION, THE TRAINING COLLEGE ASSOCIATION, AND COUNCIL OF PRINCIPALS.

A conference was held on Friday, March 14th, between the Head Mistresses' Association and the Training College Association and Council of Principals at Stockwell College. Miss Hartle, Principal of Brighton Municipal Training College, presided, and the conference was attended by thirty head mistresses and some forty representatives of training colleges.

The Supply of Candidates to the Women's Training Colleges.

MISS RICHARDS, of Stockwell College, gave statistics which had recently been collected for the information of principals. From this enquiry two facts emerged which gave rise to some anxiety. In the first place there was a definite reduction in the number of women candidates applying for entrance to the teaching profession, and that of those who had applied this year there was an increased proportion of less well qualified candidates. The reduction in the number of applicants was to some extent due to the use of a common entrance form by the colleges which urged candidates not to apply to more than five colleges, but even in spite of this it appeared that the total number was reduced, and although there were enough candidates to take up all the available vacancies in the training colleges (including those extra places recently created at the request of the Board of Education), the margin was so small that a real danger was created of admitting to the teaching profession women candidates whose standard of equipment was lower than was desirable.

A similar enquiry made among the men's training colleges showed a less serious position. More men of the required standard were applying than the colleges were able to admit.

MISS JONES (Clapham Secondary School) said that speaking from ex-

perience in her own school, there had been fewer girls in the last few years wanting to go in for elementary teaching. The main reason was that the girls of the best intellectual calibre tended in their last years at school to get particularly interested in one or two subjects which they wanted to carry rather far perhaps, at the expense of their general syllabus. The training colleges liked their entrants to have had at least a year in the Sixth form, but it was in the Sixth form that this special interest developed, and with it a disinclination to deal with the wider syllabus required in the elementary school. Probably when the new senior schools were established a greater number of girls would be attracted back to the work, seeing that some opportunity of specialization would be offered to them. Those girls who were really interested in young children would always be forthcoming for the infant and junior schools.

Another reason for the dropping off in numbers was the uncertainty as to employment. There was a current belief that in the last few years the supply of teachers had exceeded the demand, and although the figures showed that there was strikingly little unemployment among students who had left the training colleges within the last few years, this belief was difficult to combat in the minds of parents. She felt that this uncertainty was increased by the fact that the new Education Bill had not yet passed into law. The additional supply of teachers which the raising of the school age demanded would be thrown unwanted on to the market if the Bill did not go through Parliament. The problem was a difficult one. No one wanted to see poorly educated girls rushed through a short course of training into the teaching profession in order to fill a gap in the schools,

nor did they wish girls to go into teaching against their will merely because it offered a good chance of employment.

They were all anxious to see graduates in the elementary schools, and many graduates would be glad to teach there, but the differential treatment as regards salary was a definite bar. It was an unsatisfactory position that a well-trained graduate should receive one salary in one type of institution and another salary in another type. She hoped in the future to see some advancement towards equalization of pay. It would do much to unify the whole teaching profession.

She thought it possible that there were a certain number of girls who had taken up other work in the fear that they might be unemployed as teachers who would now be glad to take up teaching. There was probably some promising material amongst these girls, and she hoped that the training colleges would be able to admit them.

MISS BURNS (Maidenhead County School) described the arrangements at present obtaining in Berkshire for the preliminary training of candidates for the teaching profession. There were a great many girls in Berkshire who, in the view of the Education Committee, were unable to reach secondary schools, and for these girls the Rural Pupil Teacher system was still maintained. The centres were carefully supervised from Reading and considerable enthusiasm was shown among the pupils themselves. In 1929 ten candidates of this type entered training colleges.

From the secondary school there was a distinct drop in the number of girls entering the teaching profession in recent years. Local conditions in industry were responsible to some extent for this drop. Another factor was the disinclination on the part of many parents to keep their girls at school until 18 and then let them

embark upon a course of training which further delayed them as wage earners.

MISS JOHNSON (Bishop Otter College, Chichester) asked whether the Board of Education could not be urged to give figures as to unemployment. Her own impression was that there was very little, if any, unemployment among students trained in the two-year colleges.

MISS ALLAN (Homerton College) said that she believed the figure to be 200 unemployed teachers a year for the last three years, and these mainly graduates and for the most part in Wales.

MISS DODD (Graystoke Place T.C.) asked whether the figures quoted included those on supply and in temporary work.

MISS HARTLE (Brighton Municipal T.C.) said that no differentiation in kind of employment was made in the figures, but her impression was that teachers who were on supply were permanently on supply, and very seldom had a day's unemployment.

MISS ADDISON PHILLIPS (President, H.M.A.) said that she thought there need be no anxiety about the Bill going through. They were all anxious to secure solidarity in the teaching profession, and with the raising of the school age to 15 it became absurd to rule off secondary from elementary education. The question of salary was vital, and she hoped in the future to see the present differentiation adjusted. Moreover, she thought that many graduates would be glad to go into elementary schools if they could be employed as certificated teachers. Could not the present practice of the endorsement of the Froebel certificate be extended? They were anxious to persuade their girls to realize education as a whole, and each part of it as important as any other part.

MISS GARDINER (Blackburn) deplored the fact that in a time when

additional teachers were in demand two training colleges should have been closed down, whilst others, in prospectuses issued not many years ago, had suggested the possibility of their own discontinuance. This had not tended to relieve the doubt in regard to unemployment in the minds of parents of possible candidates. So strong was this impression that where she used to send from 12—15 girls a year through the student teacher course she now sent only one or two into training. It was also to be remembered that far more openings in commerce and industry were now open to girls of the type who used to become teachers.

MISS HAWKINS (Derby Training College), returning to the question of unemployment, said that when it arose it was usually due to the fact that young teachers wished to remain in their own homes. Those who were ready to go anywhere need have no fear of not finding posts.

DR. HAMMOND (Birmingham University Training Department) agreed with these remarks, and thought that the attitude of parents was to blame.

Speaking of the quality of entrants in the last few years she said that there was too high a percentage of less good students. Many of the graduate students training for secondary work would be better placed in elementary schools.

MISS LLOYD EVANS (Furzedown College) took a more cheerful view of the quality of the present entrants to training colleges. She considered that the standard had improved immeasurably in the last thirty years.

MISS GRAVESON (Goldsmiths' College), whilst agreeing with Miss Lloyd Evans, thought that the standard in the last two or three years had dropped. There was a fair proportion of excellence at the top, good average ability in the middle, but a very poor tail.

MISS ALLAN (Homerton College) said that in her experience there were among the entrants about 25 per cent. who were capable of first class work, 50 per cent. of good average ability, but the remaining 25 per cent. were very poor material. This might be a sign of an upward tendency in education, since it suggested that a larger number of boys and girls from an illiterate tradition were seeking higher education. Such a national upward tendency should not cause concern.

A good deal had been said about the new senior school. Personally, she would plead for the junior school. A girl should want to teach a *child*, not a *subject*. Could not the head mistresses put elementary teaching to their girls as a piece of social work? It was the Sixth Form girls that were wanted, but let their specialization take the form of an interest in the psychology of the child. The training colleges looked to the head mistresses to back them in their efforts to secure the right kind of entrants to the teaching profession. As a labour market it was a sure one, but the teacher was a late wage earner. The candidate who was not willing to leave her home was not a good recruit for the profession. In replying to a question from Miss Addison Phillips as to the loneliness of the life of the rural school teacher, Miss Allan said that she did not consider the rural school the place for the newly trained teacher. A period of town teaching was advisable first, and the trained teacher should then go to the rural school as its head at a rather more mature age.

MISS DE LISSA (Gipsy Hill T.C.) pleaded for interest in the infant school. There was too strong a tendency to regard the teaching of infants as work that could be undertaken by teachers intellectually unfitted for anything else. A girl should not be set to teach infants

because she was infantile herself. And this applied with equal force to the nursery school.

MISS PEPPER (F. L. Calder Domestic Science College, Liverpool) said that the number of applicants to domestic science training colleges was larger this year than usual, and that the standard had not deteriorated. There was no unemployment among teachers of domestic science. An anomaly that should be removed was that when a domestic science teacher, in certificated employment, was teaching other subjects in the curriculum she was paid at the uncertificated rate.

Third Year Courses.

MISS MERCIER (Whitelands College) spoke on the value of the third year of training for teachers, whether they were going to teach in senior, junior, infant, or nursery schools. She explained that the Board of Education would give a grant to a student for a third year after the completion of the two year course for the certificate, or to a trained certificated teacher who wishes to return to a training college for a year after a period of experience. The two year course could do no more than introduce the student to the subject of her study. The third year gave her the opportunity of carrying on some subject to a further level. It provided some mitigation of the inexorability of choosing a career at the age of eighteen and then being cut off after two years from all possibility of further study. Moreover, it provided the only way at present known of producing the teacher capable of specializing in the "practical" subjects of the school course.

In a third year course a student could study almost anything. For example, there were the University Diplomas in Literature, History, Geography, Biology, Divinity, Social Science, Psychology, and Drama and Diction. Nor was it necessary to

take a diploma in any of these subjects. If it was preferred a suitable course could be planned for the student to meet her individual requirements.

Various colleges offered third year courses in Art, the work being taken partly at the college and partly at an art school. There were also courses in Handwork or Art and Handwork combined. There was a course for teachers at the Royal College of Music, which students could take who were attached to a London college. A course in Physical Training had recently been started by the Chelsea Physical Training College in co-operation with Whitelands College. This was particularly important for the new senior schools, which, whilst they would probably not be able to have a Physical Training specialist on the staff, most urgently needed some teachers capable of undertaking this work.

There were also various professional courses which might be taken, such as a year's special training for nursery school teaching. It was hoped that many of the teachers for nursery schools would be recruited from teachers who, after some teaching experience, had returned for a third year course in nursery work. Some special aspect of teaching could also be studied, such as the Montessori method. It was hoped that the Certificate in Mental Hygiene at London University would soon be adapted to meet the needs of a third year course.

At present there were great difficulties in the way of third year courses. On the student's side there was the difficulty of time and money. The girls had to stay another year at college, and their earning power was delayed for a year. The experienced teacher, too, often found it difficult to break established ties and go back to college for a year.

On the side of the college the difficulty was also a financial one.

A third year student usually paid less than a two year student, and therefore it was difficult to cater for a number of third year students and remain solvent. The greatest advantage could not be taken of third year courses until the Board of Education gave them more backing by grants and the Local Education Authorities by scholarships. The third year courses should be better known, and head mistresses could do much by informing their girls of their existence and their value. She again urged the importance of the third year course for all types of teachers, and not only for the teachers in senior schools. One of the greatest difficulties about infant teaching was that the teacher tended to become cut off from intellectual interests and to become merely motherly.

MISS GRAVESON (Goldsmiths' College), supporting Miss Mercier, described the great benefit that the college derived from the presence among the students of some who were older and more experienced.

MISS LLOYD EVANS (Furzedown College) described instances she had known of specialist teachers (in Music and Art) who would have been very much better advised to have taken a two year course with a third year in their special subject.

MISS RICHARDS (Stockwell College) stressed the need for the support of the head mistresses in putting the possibilities of third year courses before their girls. She laid particular value on the maturity that was noticeably obtained by third year students before leaving college. There was great need of support from the Local Education Authorities.

MISS HAWTREY (Avery Hill College) spoke of the third year of study abroad, which had been of the greatest value to those students who had taken it.

MISS PRIDEAUX (Wisbech High School) said that the head mistresses realized the benefit of the third year courses, but had some difficulty in knowing where to advise their girls to go for different courses.

MISS HARTLE (Chairman) replied that at the present moment an enquiry was being made by the Training College Association on this subject, and that a pamphlet would in due course be issued, giving the required information.

There was a further discussion on the subject of conditions at present prevailing in training colleges. It was thought by some head mistresses that training colleges might be more explicit in their prospectuses in regard to their rules and regulations, and the normal expenses of a student over and above her fees. Stationery, books, etc., might be budgeted for with advantage, even if pocket money could not be estimated. The increased expenditure on pocket money among students of the present generation was on all sides deplored. The training college principals did not, however, think that an estimate of pocket money should be put into the prospectus. This would never be expected in the case of a university student, and ought to be a matter of individual good sense. In regard to rules and regulations, Miss Hartle said that a large proportion of the strict rules that were reported to exist were fictions in the minds of the students. She thought that in most colleges no rules existed that were not necessary for the efficient corporate life of the college.

NOTICE TO MEMBERS OF THE PHILOSOPHY AND PSYCHOLOGY SECTION.

Dr. Dowling, of St. Mary's College, Strawberry Hill, Middlesex, has kindly consented to act as General Convener of the Section for the current year in

place of Miss M. Phillips, of Crewe Training College, who has been obliged to resign from the office owing to pressure of work.

THE UNIVERSITIES AND ADULT RELIGIOUS EDUCATION.

In connection with the conference of the National Union of Teachers a well attended meeting on "The Universities and Adult Religious Education" was held at Bournemouth on Saturday, June 7th, under the auspices of the Divinity Lectures Committee. The speakers were Principal Garvie, Dean Inge, and Miss M. S. West, Hon. Organizing Secretary of the Committee.

Dr. Garvie, speaking on "The Value of the Modern Study of the Bible," said that the old faith in the verbal inspiration of Scripture had passed away. The modern approach to the Bible showed it as a progressive revelation extending over many centuries. Viewed in this way the cruder elements of the Old Testament were now merely of interest as belonging to a primitive period of human thought, and, freed from these survivals, the grandeur of the Old Testament and its permanent value shone out all the more clearly as the result of modern Biblical research.

Dean Inge, speaking on "The Intellectual Approach to Religion," deprecated the tendency of recent years to undervalue the powers of the intellect in the search for philosophic and religious truth. The philosophy of Bergson, the pragmatism of Dr. James and his school, the theology of Dr. Otto's remarkable book on "The Holy," and the recent Einstein theory in science, had tended to suggest the bankruptcy of human intelligence in its strivings after a rational interpretation of the universe. In religion this was leading to a relapse to the irrational level whose disastrous effects were being felt in many directions. To try to suppress the strivings of the intellect was to grieve the Holy Spirit of Truth, but in seeking to attain truth there must be a real appreciation of the difficulty and arduous nature of the search. It was untrue to say that Christianity

had never been a rational religion. There had been three periods in history when Christian thought was abreast of the best thought of the age, and guided it on to higher levels. These periods were under the Alexandrians of the second century, the Schoolmen of the Middle Ages, and the German thinkers of the eighteenth century. The task of to-day must be to make religious thought once more take its place as the leader and guide of civilization and of the intellectual life of mankind.

Miss West, in speaking on "Practical Methods of obtaining Adult Religious Education," pointed out that the recent action of the National Union of Teachers in strongly opposing the right of entry into the schools by outside bodies for the purpose of religious teaching, meant a demand to keep the religious education of the child in school entirely in the hands of the teacher. Many would sympathize with this attitude. Teaching was a profession requiring an arduous training, and it was but right that the most important of all subjects should be taught by the best qualified teachers. But this made the necessity of more advanced Bible study on modern lines all the more urgent to fit teachers to give to this important subject the same care and knowledge that they gave to the rest. The universities, through their Extra-mural Boards, were now prepared to send qualified university lecturers on the Bible to any group of persons in town or villages that might apply to them for such a class. The rapid increase of such university extension and tutorial classes on the Bible during the last four years proved that a real demand was being met. The Divinity Lectures Committee existed to make these facilities known, and the Secretary, 6, Albert Place, London, W.8, would be very glad to give help or advice in the organization of such classes in any part of the British Isles.

CONFERENCE ON THE INTERCHANGE OF TEACHERS.

On behalf of the Training College Association, the President attended and spoke at a conference on the Interchange of Teachers, held at the Board of Education on May 22nd, 1930. The President of the Board welcomed the conference, and Sir Frederick Kenyon opened the discussion.

The following resolution was passed :

“ That in view of the importance of developing the exchange of teachers between the United Kingdom and foreign countries and in order to secure co-ordination

and prevent waste of effort, it is desirable to establish a central representative organization of Teachers' Associations and other bodies interested to promote and co-ordinate arrangements for such exchanges.”

A Committee, consisting of Miss Cowan, Dr. Winifred Cullis, Mr. Parker, Dr. Costley White, Mr. Guthrie, Miss Debenham, and Miss Bosanquet, was appointed to consider the precise organization of the co-ordinating Committee for the Interchange of Teachers, and to submit proposals to a future meeting of the conference.

CENTRAL ADVISORY COMMITTEE FOR THE CERTIFICATION OF TEACHERS.

This Committee has now been set up by the Board of Education, acting upon the recommendation of the Report of the Committee on Universities and Training Colleges. It includes in its membership four nominees of the Joint Standing Committee of the Training College Association and Council of Principals, as follows :

Miss A. Lloyd Evans,
Mr. T. P. Holgate,
Mr. F. L. Attenborough,
Miss S. E. S. Richards.

Any Branch or Section wishing to bring any matter to the consideration of this Committee should first approach the T.C.A. Council.

NOTICE TO THE GEOGRAPHY SECTION.

The General Convener of the Section, Miss E. W. Jones, has left Warrington

College. Her address is : 2, Fordington Road, Highgate, N.6.

BOOK LIST REVISED BY THE RELIGIOUS EDUCATION COMMITTEE.

The Religious Education Committee has recently revised the list of books recommended for the use of teachers in the preparation of Scripture lessons. The list, which is printed below, can be obtained from the Secretary at 1d. each, or 8s. a hundred. A copy of the list has been sent to every Director or Secretary for Education and to the Secretaries of Diocesan Education Boards, and requests for additional copies have already been received from a considerable number of authorities.

Books Recommended for the use of Teachers in the Preparation of Scripture Lessons.

| | | £ | s. | d. |
|------------------|--|-------------------------|----|------|
| MOULTON. | Modern Readers' Bible | Macmillan | 0 | 16 0 |
| MONTEFIORE. | Bible for Home Reading. Parts I and II | | | |
| | Macmillan. Each | | 0 | 6 0 |
| MOFFATT. | The New Testament (a new translation | | | |
| | Hodder and Stoughton | | 0 | 6 0 |
| „ | The Old Testament (a new translation) | | | |
| | Hodder and Stoughton | | 1 | 1 0 |
| „ | Everyman's Life of Christ | Dent | 0 | 6 0 |
| FULLER. | Harmony of the Four Gospels | S.P.C.K. | 0 | 1 6 |
| | Nelson's School Bible | Nelson | 0 | 2 0 |
| YEO. | Two Minute Bible Readings | S.C.M. | 0 | 3 0 |
| CLEGG. | Narrative Dialogues from the Bible (Paper) .. | Heffer | 0 | 2 6 |
| | Cambridge Bible for Little Children under 8 | | | |
| | Cambridge University Press | | 0 | 1 3 |
| | Old Testament Books in Colloquial Language. | | | |
| | National Adult School Union. From | | 0 | 0 9 |
| GORE. | A New Commentary | S.P.C.K. | 0 | 16 0 |
| | Peake's Commentary on the Bible | Jack | 0 | 12 6 |
| | Clarendon Bible. ED. BLUNT | Oxford University Press | | |
| | Already published : Old Testament, Vols. III and IV. St. Mark, | | | |
| | Acts, Galatians | per volume | 0 | 4 6 |
| MACKIE. | Bible Manners and Customs (Paper, 9d.) | T. and T. Clark | 0 | 1 6 |
| BAIKIE. | Lands and Peoples of the Bible | Black | 0 | 5 0 |
| | Philips' Scripture Atlas | | 0 | 1 3 |
| SKINNER. | Concerning the Bible | Sampson Low | 0 | 5 0 |
| PATERSON SMYTHE. | People's Life of Christ | Hodder and Stoughton | 0 | 2 6 |
| GLOVER. | The Jesus of History | S.C.M. | 0 | 4 6 |
| BIRD. | Jesus the Carpenter | Nelson | 0 | 3 6 |
| TEMPLE. | Christ's Teaching about God | S.C.M. | 0 | 1 6 |
| FINDLAY. | Realism of Jesus | Hodder and Stoughton | 0 | 3 6 |
| MATTHEWS. | Paul the Dauntless | Partridge | 0 | 6 0 |
| ANDREW LANG. | The Book of Saints and Heroes .. | Longman Green | 0 | 7 0 |

| | | £ | s. | d. |
|---|--|--------|----|-----|
| DEARMER. | Everyman's History of the Church Mowbray | 0 | 2 | 6 |
| „ | Everyman's History of the Prayer Book . . „ | 0 | 2 | 6 |
| SANDS. | Literary Genius of the Old Testament Oxford University Press | 0 | 4 | 6 |
| SARSON AND PHILIPS. | History of the People of Israel . . Longmans | 0 | 6 | 0 |
| WALTER DE LA MARE. | Stories from the Bible. (Genesis to David) Faber and Gwyar | 0 | 7 | 6 |
| REDLICH. | Old Testament Stories and How to Teach Them . . Macmillan | 0 | 5 | 0 |
| ROBINSON, T. H. | Prophets and Prophecy Duckworth | 0 | 6 | 0 |
| BLUNT. | Prophets of Israel Oxford University Press | 0 | 2 | 6 |
| GILLIE. | Story of the Hebrew Prophets Black | 0 | 5 | 0 |
| KNAPP. | Amos and His Age Murby | 0 | 2 | 6 |
| AYRE. | A Course of Religious Teaching for Senior Schools. . S.C.M. | 0 | 4 | 0 |
| LEE. | Lessons on the Life of our Lord Jesus Christ. . National Society | 0 | 4 | 0 |
| „ | Scenes and Characters from the Old Testament „ „ | 0 | 4 | 0 |
| „ | More Scenes and Characters from the Old Testament National Society | 0 | 4 | 0 |
| Teachers and Taught Series : Address : 4, Fleet Lane, E.C.4 : | | | | |
| | Period of the Patriarchs Headley | } each | 0 | 1 6 |
| | United Monarchy of the Hebrews „ | | | |
| | Lessons on the Kingdom of Israel „ | | | |
| | Lessons on the Kingdom of Judah „ | | | |
| | Lessons on the Jewish People „ | | | |
| ROWTON. | The Making of the Bible National Society | 0 | 4 | 0 |
| | Yearly Lesson Books National Adult School Union | 0 | 1 | 3 |
| HUGHES. | From Baptism to Holy Communion . . National Society | 0 | 4 | 0 |
| GADSBY AND KIRKNESS. | The Little Children's Hymnal . . Harrap | 0 | 1 | 0 |
| Leicestershire Education Committee | in Prayers and Hymns for School Use Milford | 0 | 1 | 0 |
| National Society's | Self-Teaching Cards on Old Testament, New Testament, and Prayer Book, etc. each | 0 | 0 | 1 |
| LEE. | Pamphlet on "Self-Teaching in Religious Instruction" National Society : Address : 19, Great Peter Street, S.W.1 | 0 | 0 | 4 |

Material for Missionary Lessons.

Livingstone Press, Livingstone House, Broadway, S.W.1.

PICTURES :

Burnand's Illustrations of his Parables.

Class-room size. The Challenge Bookshop, 24, Great Russell Street, W.C.1.

Four enlargements from Neil's "Everyday Life in the Holy Land."

Published by S.P.C.K., Northumberland Avenue, W.C.2.

Six Views of the Holy Land, by T. P. Anson.

Class-room size. Challenge, 24, Great Russell Street, W.C.1.

Models of all kinds may be obtained from Teachers and Taught, 4, Fleet Lane, E.C.4.

SOME NOTES ON THIRD YEAR AND OTHER COURSES OPEN TO STUDENTS OF TRAINING COLLEGES AND UNIVERSITY DEPARTMENTS, IN ADDITION TO THE TWO YEAR COURSE.

Third Year Courses.

Although Third Year Courses (other than those in preparation for a degree) have been open for many years to students who have been previously trained for two years in a training college, they are at present little known, and their usefulness insufficiently appreciated. As this pamphlet shows, a very large variety of courses exists. A student may read, for example, for a university diploma, attend art schools or colleges of music, or spend a year in France. Nor is it necessary that the course should lead to a particular certificate or diploma, it may be specially planned to meet the needs of the individual. Students can pass in their third year from their first college to a second, or to some other institution which offers the particular facilities they seek. Migration from one centre to another is an old and valuable element in education.

A Third Year Course is useful to all teachers in all types of school, but at the present time its importance is perhaps most apparent in relation to the work of the new senior schools. The teacher who combines the all-round qualifications of the Two Year Course with specialized knowledge in one direction is a capable all round member of a school staff who can rise to the headship of a school. This is equally true of those whose bent lies in Music, Physical Training, and the Arts and Crafts, as of those who have taken academic or professional courses.

It has long been recognized that two years is far too short a period of preparation for a life spent in the schools. Though comparatively few may afford to remain for another year, yet the opportunity of returning remains open. A teacher of experience can take a "Deferred Third Year." The diplomas in Social Science and Psychology are best approached after experience, and courses can always be specially planned for those who see some special work ahead of them, and desire to fit themselves for it.

Application for permission to take a Third Year Course must be made to the Board of Education by the college at which the student has previously been trained, and as in many cases a third year student is resident at a training college an early application is desirable.

The following is a list of Third Year Courses at present available. It is feared that in this first edition there may be some omissions, and the Association would be glad to be informed of any other courses that are open.

Third Year Courses.

UNIVERSITY COURSES.

LONDON UNIVERSITY DIPLOMA AND CERTIFICATE COURSES.

The following Day Diploma Courses and Certificate Courses are open to third year students who must be attached to a London training college. Lectures for the courses are held at the University institutions specified below, and the training colleges undertake professional work in connection with them.

In every case permission for the student to take the course must be obtained by the college at which the Two Year Course has been taken, and communicated to the college to which the student is to be attached.

Students desiring to take any of these courses should apply during their second year of training, and if possible before February 1st to the college of their choice in London to learn whether they can be admitted. Application to the University institution must be made not less than three months before the beginning of the course, and an interview with the head of the department concerned is usually arranged.

Expenses.—The normal tuition fee charged by the University institutions for a diploma course is 28 guineas. For information in regard to inclusive fees covering tuition and residence application should be made to the individual training colleges, who will also supply information in regard to grants and scholarships. Examination fees are given below.

Academic Diploma in Biology.

The course is taken at Bedford College for Women. It is open to students in training who have, in the opinion of the University, pursued a satisfactory course in Biology during the first two years of training.

Examination fee : £5 5s.

Syllabus obtainable from the Academic Registrar, University of London, S.W.7.

Certificate in Diction and Drama.

This course is intended for teachers who require a practical working knowledge of the subjects of the certificate such as would be of special value in educational work. It is open to registered or provisionally registered teachers or to other persons specially approved. The course is taken at the Central School of Speech Training, or at the Royal Academy of Dramatic Art. Application to be made before September 1st, through the authorities of the college to which the student is to be attached.

Examination fee : £2 12s. 6d.

Syllabus obtainable from the University Extension Registrar, University of London, S.W.7.

Diploma in Economics and Social Science.

Special arrangements for a one year full-time course, covering the ground of the four year evening course for the diploma, have been made at the London School of Economics for such students as are approved by the School Authorities as qualified by previous education and experience to benefit by attendance at the lectures for the course.

The exact course to be taken by each student is arranged after an interview with the head of the department at the school, which should be arranged before the end of June.

As some experience in social work is required before a student is admitted to this course, it is particularly suitable for "deferred" third year students.

Examination fee : £3.

Syllabus obtainable from the University Extension Registrar, University of London, S.W.7.

Academic Diploma in Geography.

The course is taken at King's College, or at the London School of Economics. It is open to matriculated students of the University or to non-matriculated students who have satisfied the conditions for provisional registration by the Royal Society of Teachers.

Examination fee : £5 5s.

Syllabus obtainable from the Academic Registrar, University of London, S.W.7.

Diploma in History.

The course is taken at King's College or at University College. Students attend the lectures for the honours degree for one year. Admission to the course is restricted to such students as are considered by the College authorities to be qualified to benefit by attendance at lectures for the honours course.

Examination fee : £3.

Syllabus obtainable from the University Extension Registrar, University of London, S.W.7.

Diploma in Literature.

The course is taken at King's College. Students attend for one year the lectures for the honours degree course in English. Admission to the course is restricted to such students as are considered by the College authorities to be qualified to benefit by attendance at the lectures for the honours course.

Bursaries of £15 are awarded by the authorities of King's College to students taking this course.

Examination fee : £3.

Syllabus obtainable from the University Extension Registrar, University of London, S.W.7.

Academic Diploma in Psychology.

This is normally a two-year course, but it may be taken as a third year course in one year by teachers of experience. The course is open to post-graduate students, or to non-graduates who have satisfied the University that their previous education and experience qualify them to rank on the same level as the graduates approved for the course, provided that non-matriculated students shall not be admitted to the course without the approval of the Board to Promote the Extension of University Teaching.

Examination fee : £5 5s.

Syllabus obtainable from the Academic Registrar, University of London, S.W.7.

Academic Diploma in Theology.

This course is taken at King's College. It is normally a two year course but arrangements may be made for the whole or part of the course to be taken in one year by third year students in training. Non-matriculated students must obtain the approval of the Board to Promote the Extension of University Teaching.

Examination fee for the whole examination £5 5s., or for one part £3 3s.

Syllabus obtainable from the Academic Registrar, University of London, S.W.7.

There is also a course for a *Certificate in Religious Knowledge*, at King's College, London. The course is less advanced than that for the diploma. Particulars may be obtained from the Principal, King's College, Strand, W.C.2.

CAMBRIDGE UNIVERSITY.

Students attached to Homerton College, Cambridge, may, in a third year, take the following courses :

Course for the Cambridge University *Geography Diploma* ;

First Year Course for the *English Tripos* ;

First Year Course in *Biology* for the Natural Science Tripos.

Fees inclusive of residence and tuition £50. The College pays the University fees.

Syllabuses may be obtained from the University Registrar.

BIRMINGHAM UNIVERSITY.

Third Year Courses for *Women* students are available in English, History, Geography, Mathematics, Botany, Zoology, French, and Music. Particulars may be obtained from the Head of the Women's Division, Education Department, University of Birmingham.

BRISTOL UNIVERSITY.

Testamur in Biology.

Candidates for the Testamur shall be students who have taken a Two Year Course in the Department of Education, trained certificated teachers, or such other persons as the Science Board may deem fit. The course of study includes Botany and Zoology, and extends over one year.

The inclusive fee for the Testamur in Biology, including examination, is 30 guineas. For students taking the Testamur as a Third Year Course under the regulations of the Board of Education the fee is £10.

Particulars may be obtained from the Professor of Education, The University, Bristol.

Testamur in Education.

The University offers to trained certificated teachers a Third Year Course in accordance with the regulations of the Board of Education, leading to the Testamur in Education. The course includes the principles and practice of teaching, and such other subjects as may be approved in each individual case.

The fee, including examination, is £10.

UNIVERSITY COLLEGE, NOTTINGHAM.

A Third Year Course in Biology is under contemplation. Particulars obtainable from the Professor of Education.

READING UNIVERSITY.

A Third Year Course in Rural Science is being organized for deferred students and also a course in Fine Art and Handicrafts.

Particulars obtainable from the Head of the Department for the Training of Teachers.

UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH.

Diploma in Biology.

The course for the diploma is open to students of training colleges who can produce evidence of having pursued a satisfactory course in Biology during the first two years. Students reside in one of the Halls of Residence of the University College.

Particulars may be obtained from the Professor of Education.

MANCHESTER UNIVERSITY.

A One Year Course is offered for teachers of the deaf. For particulars apply to the Professor of Education.

Third Year Courses in Art and Crafts.

Courses open either to continuous or deferred third year students are offered at the following colleges :

BIRMINGHAM, SALTLEY COLLEGE (for Men).

Courses in Art and Crafts are being arranged to start in September, 1930. Students will reside at Saltley College, and attend courses at the Birmingham School of Art and Crafts.

Inclusive fee for residence and tuition : £30.

Particulars may be obtained from the Principal.

BRIGHTON, MUNICIPAL TRAINING COLLEGE (for Women).

A course in Art and Handcraft is taken partly at the College and partly at the Municipal School of Art.

Inclusive fee for tuition and residence : £40.

Particulars may be obtained from the Principal, Municipal Training College, 8, Eastern Terrace, Brighton.

DERBY, DIOCESAN TRAINING COLLEGE (for Women).

A Third Year Course is offered in Handcrafts, including Pottery, Weaving, and Bookbinding. Courses in other forms of handcraft can be arranged on application.

Fees, £40 per annum, including tuition and residence.

Particulars may be obtained from the Principal.

LEEDS CITY TRAINING COLLEGE (Men and Women).

Courses in Art and Handwork are held at the College.

Fee for tuition and residence, £40.

Particulars may be obtained from the Principal, City Training College, Beckett Park, Leeds.

LONDON : L.C.C. COLLEGES : AVERY HILL, FURZEDOWN.

Third Year Courses in Art and Crafts are taken partly at the Colleges and partly at London Art Schools. It is usual at Furzedown for third year students to attend as day students.

Tuition fee, £20. The fees of students whose parents reside in the London County Council area are paid by the L.C.C. Resident fees at Furzedown and Avery Hill, £40 (scholarships are given to London students).

Particulars from the Principal of each College.

LONDON, GOLDSMITHS' COLLEGE.

A course of Art is arranged by the Training Department in conjunction with Goldsmiths' College School of Fine Art, or one of the London Schools of Art and Crafts.

A course in Handicraft is taken chiefly in the Training Department. Special crafts are Weaving, Bookbinding, Needlework and Embroidery, Domestic Upholstery, and (for men) Woodwork and Metalwork.

Fees : Day students (including tuition, examination, and mid-day dinners) £31 15s. (day students receive a grant from the Board of Education of £26 for men and £20 for women). Hostel fees : £13 for men or £12—£15 (according to hostel) for women.

Particulars may be obtained from the Warden, Goldsmiths' College, New Cross, S.E.14.

LONDON, ST. KATHARINE'S COLLEGE.

A course in Art and Craftwork is taken partly at the College and partly at the Central School of Arts and Crafts.

College fees, £20. Students pay their own fees to the Central School.

Particulars may be obtained from the Principal, St. Katharine's College, Tottenham, N.17.

LONDON, WHITELANDS COLLEGE (for Women).

Course in Art or in Art and Crafts are offered. Some work is taken in the College and students attend various London Art Schools for special classes in Life Drawing, Painting, Illustration, Pottery, Embroidery, Bookbinding, etc., etc.

Inclusive fee for residence and tuition, £40.

Particulars may be obtained from the Principal, Whitelands College, Chelsea, S.W.3. (Address after the end of July, 1930 : Whitelands College, West Hill, Putney, S.W.15.)

LONDON, STOCKWELL COLLEGE (for Women).

A course in Art can be arranged on application to the Principal.

Fees : £40 for residence and tuition at the College. The Governing Body offers six scholarships to pay the fees up to £30 at an outside institution.

NORWICH, THE TRAINING COLLEGE (for Women).

A Third Year Course in Art and Craft in connection with the Norwich School of Art is in contemplation. Particulars may be obtained from the Principal.

WINCHESTER, KING ALFRED'S COLLEGE (for Men).

Courses are provided in Art and Handwork.

Inclusive fee for tuition and residence, £25.

Particulars may be obtained from the Principal.

For Courses in Art and Crafts see also Birmingham and Reading Universities.

Third Year Courses in Domestic Science.

Students trained in an ordinary two year college may proceed for a third year to a college of domestic science. Courses are offered as follows :

THE NATIONAL TRAINING SCHOOL OF COOKERY AND OTHER BRANCHES OF DOMESTIC ECONOMY, BUCKINGHAM PALACE ROAD, LONDON, S.W.1.

A Deferred Third Year Course in a wide range of subjects is offered to teachers with two years experience who are recommended by the principal of their original training college, the Local Education Authority under whom they are employed, and by an H.M.I. Particulars may be obtained from the Principal. There is also a course in General Housecraft or Needlework and Dressmaking, which may be taken as a Continuous or Deferred Third Year.

MANCHESTER, MUNICIPAL TRAINING COLLEGE OF DOMESTIC ECONOMY.

A Third Year Course is offered in Domestic Subjects.

Fees for the course, £30 (non-resident). Hostel fees, £11 per term.

Particulars may be obtained from the Principal of the College, High Street, Chorlton-on-Medlock, Manchester.

LIVERPOOL, F. L. CALDER COLLEGE.

A Third Year Course in Needlework and Dressmaking, including Drawing and Design, and the Chemistry of Textiles, is offered, and also in Cookery, Laundrywork, and Housewifery.

Particulars may be obtained from the Principal of the College, Colquitt Street, Liverpool.

LEEDS, YORKSHIRE TRAINING COLLEGE OF HOUSECRAFT.

A Third Year Course in Housecraft is offered. Students should have taken Needlework and Science, including some Chemistry, before entering for the course. It is also advised that Art should have been taken in the Two Year Course.

Particulars may be obtained from the Principal of the College, 90, Albion Street, Leeds.

The following domestic science colleges have not up to the present taken third year students, but are prepared to organize courses for them if required :

The National Society's Training College of Domestic Subjects, Fortune Green Road, London, N.W.6 ; the Northern Counties Training College of Domestic Science, Northumberland Road, Newcastle-on-Tyne ; the Domestic Science Training College, Long Acre, Bath ; and the Training College of Domestic Arts for South Wales and Monmouthshire, 6, St. Andrew's Place, Cardiff.

Third Year Courses in French.

Students who have taken French in the Two Year Course may be allowed by the Board of Education to take a Third Year Course, under the Board's regulations, in France. It is necessary in each case for permission to be obtained from the Board of Education by the training college at which the Two Year Course has been taken. Such students have in the past attended an Ecole Normale during their period of residence in France.

An alternative course has recently been arranged by the British Institute in Paris, at the request of the Board of Education, and is intended particularly for teachers in central and " modern " schools. Students selected for this course will spend a year at the British Institute in Paris, and it is suggested that their studies shall receive a non-academic orientation. Each student will live separately in a French family. A certificate will be awarded by the Institute at the end of the course to those students who complete it satisfactorily.

Particulars may be obtained from the British Institute, 6, Rue de la Sorbonne, Paris.

The fee for the course of three terms, from October to July, will be £30. The Institute estimates the cost to the student of living in a French family (selected by the Institute) at from £10—£12 a month, and suggests that in addition the student will require about £6 pocket money per term.

A third year student from a voluntary college taking a course in France receives a tuition grant of £26, and a maintenance grant of £34 from the Board of Education.

Third Year Courses in Music.

Courses are available in the following colleges :

HULL, THE ROMAN CATHOLIC COLLEGE, ENDSLEIGH (for Women).

A course in Music is taken in the college.

Fees for tuition and residence, £85 approximately.

Particulars may be obtained from the Principal.

LEEDS, CITY TRAINING COLLEGE (for Men and Women).

A course in Music is taken in the College.

Fees for tuition and residence, £40.

Particulars may be obtained from the Principal, City Training College, Beckett Park, Leeds.

LONDON : L.C.C. Colleges : AVERY HILL, FURZEDOWN (for Women).

A course in Music is taken in connection with the Royal Academy of Music or the Guildhall School of Music.

Fees : Day students, £20 (London students, free) ; resident students, £40 (scholarships available for London students).

LONDON, GOLDSMITHS' COLLEGE (for Men and Women).

A course is taken partly at the College and partly at the Royal Academy of Music.

Fees : Day students (including tuition, examination, and mid-day dinners), £31 15s. (Day students receive a grant from the Board of Education of £26 for men and £20 for women.) Hostel fees : £13 for men and £12—£15 for women.

Particulars may be obtained from the Warden, Goldsmiths' College, New Cross, S.E.14.

LONDON, STOCKWELL COLLEGE (for Women).

A course in Music is taken in conjunction with the Royal Academy of Music.

Fees : £40 for residence and tuition at the College. The Governing Body gives six scholarships to pay the fees up to £30 a year at the outside institution.

Particulars may be obtained from the Principal, Stockwell College, S.W.9.

LONDON, WHITELANDS COLLEGE (for Women).

A course in Music is taken partly at the College and partly at the Royal College of Music. Students work for the R.C.M. Teachers' Diploma.

Inclusive fees for tuition and residence, £40.

Particulars may be obtained from the Principal, Whitelands College, Chelsea, S.W.3. (Address after July, 1930 : Whitelands College, Putney, S.W.15.)

WINCHESTER, KING ALFRED'S COLLEGE (for Men).

A course in Music is taken at the College. A music student may be given a small sum if capable to act as Chapel Organist.

Fees, inclusive of residence and tuition, £25.

Particulars may be obtained from the Principal.

See also Birmingham University.

Third Year Courses in Physical Training.

LONDON, WHITELANDS COLLEGE.

A course in Physical Training has been arranged in conjunction with the Chelsea Physical Training College. Students are attached to Whitelands College, and the work is taken partly at Whitelands and partly at the Physical Training College.

Inclusive fees for tuition and residence, £40.

Particulars may be obtained from the Principal, Whitelands College, Chelsea, S.W.3. (Address after the end of July, 1930 : Whitelands College, West Hill, Putney, S.W.15.)

Professional Third Year Courses.

NURSERY SCHOOLS.

Third Year Courses designed to prepare trained teachers for work in nursery schools are available as follows :

DARLINGTON TRAINING COLLEGE.

The course is taken partly at the College and partly in a nursery school in Darlington, and leads to a diploma in nursery school work. It is intended as a preparation for superintendents and assistant superintendents in nursery schools.

Full particulars may be obtained from the Principal.

Approximate cost £50.

LONDON, GIPSY HILL TRAINING COLLEGE.

Deferred Third Year Courses for nursery schools and infants' schools are available for trained certificated teachers who have had at least three years experience.

Fee : £54.

Particulars and prospectus from the Principal, Gipsy Hill Training College, The Avenue, S.E.19.

LONDON, GOLDSMITHS' COLLEGE.

Students work in the College Nursery School (on the premises), visit other nursery schools and attend clinics, children's hospitals, etc.

Fees : Day students (including tuition, examination, and mid-day dinners) £31 15s. (Day students receive a grant from the Board of Education of £26 for men and £20 for women.) Hostel fees : Men £13, women, £12—£15.

Particulars may be obtained from the Warden, Goldsmiths' College, New Cross, S.E.14.

LONDON, THE RACHEL MACMILLAN TRAINING COLLEGE, DEPTFORD.

Third year students are resident at the College and work in the nursery school.

COURSES FOR INFANT AND JUNIOR TEACHERS.

GIPSY HILL TRAINING COLLEGE, LONDON.

A Third Year Course in Infant and Junior Work is open to deferred students after an interval of teaching (see under Nursery Schools).

HULL, ROMAN CATHOLIC COLLEGE.

A Third Year Course in Infant and Junior Work is held at the College.

Fees : £85 for residence and tuition.

Particulars may be obtained from the Principal.

COURSES FOR TEACHERS OF THE BLIND, DEAF, ETC.

Third Year Courses of this nature can be arranged at some London colleges, e.g., FURZEDOWN, STOCKWELL, WHITELANDS. There is also a course for teachers of the deaf at MANCHESTER UNIVERSITY.

COURSES IN RURAL SCIENCE.

Third Year Courses designed to fit teachers for work in rural schools are in contemplation at BISHOP OTTER COLLEGE, CHICHESTER, and at the TRAINING COLLEGE, TRURO.

Particulars to be obtained in each case from the Principal.

READING UNIVERSITY is arranging a course in Rural Science for third year students, beginning in October, 1930.

Fees: Tuition, about £7; maintenance about £47.

Particulars may be obtained from the Head of the Department for the Training of Teachers, The University, Reading.

Refresher Courses for Teachers of Experience.

Teachers of experience who are not able to spend as long as a year can obtain refresher courses of one term, or even less, in length. A period such as this may be too short for the study of any special subject, but it may be very usefully employed in visiting schools and gaining a knowledge of the best that is being done in any given area. There is time also to start new interests and to be advised as to courses of reading and further study.

Refresher courses are offered at the following colleges:

HOMERTON COLLEGE, CAMBRIDGE.

One-term courses in Mathematics, and two-term courses in Handwork have been taken. The students are resident.

Particulars may be obtained from the Principal.

WHITELANDS COLLEGE, CHELSEA, LONDON.

Courses of one term or less have been taken in any kind of professional work chosen by the particular students. Students are resident.

Particulars may be obtained from the Principal. (Address after July, 1930: Whitelands College, Putney, S.W.15.)

GOLDSMITHS' COLLEGE, LONDON.

The College has from time to time arranged refresher courses of three weeks' duration and of specific character for selected teachers from a particular Local Education Authority. Students attending live in lodgings as a rule.

Particulars may be obtained from the Warden, Goldsmiths' College, S.E.14.

LEEDS CITY TRAINING COLLEGE.

Short courses in the teaching of Science and Physical Training have been arranged for the teachers under the Leeds Authority, about a week in each case.

Particulars may be obtained from the Principal.

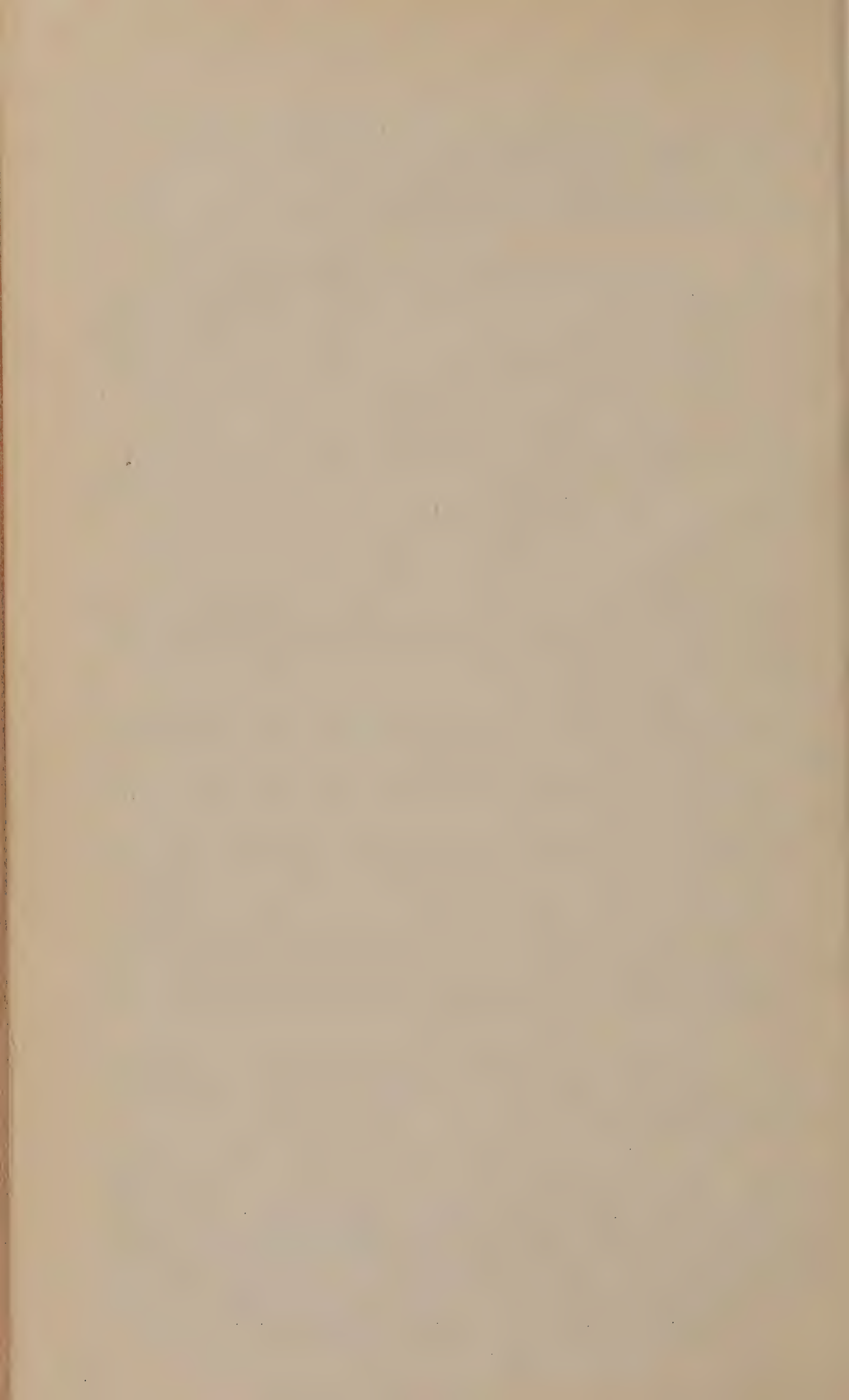
STOCKWELL COLLEGE, LONDON.

The College has for several years arranged a refresher week for old students. The students are resident.

Particulars may be obtained from the Principal, Stockwell College, Stockwell Road, S.W.9.

Short courses of this nature for certificated teachers are also in contemplation at the TRAINING COLLEGE, DARLINGTON, and might be arranged at the TRAINING COLLEGE, CREWE; at UNIVERSITY COLLEGE, NOTTINGHAM; and at UNIVERSITY COLLEGE, SOUTHAMPTON.

NOTE.—The issue of a pamphlet on the following lines is at present being arranged by the Council in reply to requests for information on the subject from various sources. This first edition is necessarily somewhat tentative, and the Secretary will be very glad indeed to be informed of any Third Year or Refresher Courses which have been omitted from the list, or of any error which should be corrected before the pamphlet is issued.



The Training College Bulletin

Edited on behalf of the

TRAINING COLLEGE ASSOCIATION

by

The SECRETARY and Lt.-Col. W. J. DOUGLAS,
Saltley College, Birmingham.

No. 24

NOVEMBER, 1930

SECRETARY'S NOTES.

The Council met in York on June 20th and in London on October 18th, 1930.

Committee on Sections.

This Committee, consisting of the General Section Conveners and three members of the Council, met in Leeds on June 14th, and reported to the Council. Mr. E. R. Hamilton has been appointed organizer of sectional work and it has been agreed to ask all sections during the ensuing year to devote some time to the problems of the new senior schools with a view to the drawing up of a joint report on the subject by the Sections Committee. It has been further agreed that each General Section Convener shall have at least one meeting each year with the Branch Convener of the Section—the expenses of such meetings to be borne by the T.C.A. The Council has also suggested to the sections that they should adopt a plan of electing their Conveners for three years instead of one year periods.

“Forum of Education.”

Negotiations have been in progress during the year as an outcome of which it is hoped in the coming year to issue a new journal, jointly with the British Psychological Society, to be entitled the *British Journal of Educational Psychology*. If this journal is published the *Forum of Education* will cease to be issued, but the BULLETIN will be enlarged to include book reviews and certain other material which, whilst of interest to training college lecturers, may not be

suitable for publication in the new journal. The cost of the *British Journal* will be £1 per annum, but it will be supplied at a greatly reduced cost to T.C.A. members. A limited liability company is at present in course of formation to issue the new journal, and the T.C.A. Council are glad to announce that the Editor will be Professor Valentine.

Publications.

In July a pamphlet on “Third Year and Other Courses” (revised from the draft issued in the last number of the BULLETIN) was issued. Free copies were circulated to the members of the Head Mistresses' Association, and there has been a considerable demand for further copies. The Secretary would be glad if Principals would keep her informed of any new Third Year or Refresher Courses that are started in their colleges in order that these may be included in any subsequent edition of the pamphlet.

A LIST OF BOOKS recommended for use in the preparation of Scripture lessons has been issued in revised form, and over 2,000 copies have been distributed and sold.

T.C.A. Representation at Conferences, etc.

Delegates have represented the T.C.A. during the summer and autumn at meetings of the following bodies: The Nursery Schools' Association, The National Institute of Industrial Psychology, The Central Council for School Broadcasting, The Conference of Educational Associations,

the N.U.T. (Demonstration on Raising the School Age), the Examinations Enquiry Committee of the New Education Fellowship, the British National Committee of Intellectual Co-operation, etc. Miss Lloyd Evans has been re-appointed as T.C.A. representative on the Governing Body of the Dartford Physical Training College.

Dr. J. Reaney has been re-appointed to the Council of the National Playing Fields Association.

T.C.A. Insurance Scheme.

Negotiations have been carried on with a well-known insurance company with a view to securing for T.C.A. members the preferential rates of insurance (life, accident, motor car, house purchase, etc.) at present enjoyed by members of certain other educational associations. These negotiations are nearing completion and an announcement will be made on the subject at the annual meeting.

Annual Meeting, 1931.

The thirty-ninth annual meeting will be held on January 1st and 2nd,

1931, at University College. Programmes are being issued this month. At the section meetings on January 1st plans will be discussed for the work on senior schools to be undertaken in the coming year. Members are thus particularly urged to attend their section meetings this year.

At the morning meeting on January 2nd Dr. MacRae, of the National Institute of Industrial Psychology, will speak on Vocational Guidance, and at five o'clock, Miss A. G. Philip, Chief Woman Inspector to the Board of Education, will give an address, followed by discussion, on the possible ways that the training colleges can help the Central Council for school broadcasting in securing the proper use of the school broadcast lessons. A practical demonstration will illustrate Miss Philip's address.

Boots' Library.

Members are reminded that before renewing their subscription to the above library they should apply to the T.C.A. Secretary for forms which will entitle them to a reduced rate of subscription.

CENTRAL ADVISORY COMMITTEE FOR THE CERTIFICATION OF TEACHERS.

The first meeting of this body was held on Monday, November 3rd, in the Board Room at the Board of Education. Most of the members were present, and they were welcomed on behalf of the President of the Board by Mr. Morgan Jones, Parliamentary Secretary to the Board of Education. Mr. Mayor then took the chair, and the procedure to be followed by the Committee formed the business of the meeting. A strong desire was expressed for continuity in the composition of the Committee, as it was felt that for some time to come there would be need for the experience of those who had been connected with the movement from its beginnings. No attempt was made at this first

meeting to consider the results of the recent examinations, as some of the Area Boards had not yet sent their returns to the Board of Education.

The next meeting was fixed for February 9th, 1931.

The following circular has been received from the Board of Education:
CENTRAL ADVISORY COMMITTEE FOR THE CERTIFICATION OF TEACHERS.

1.—The President of the Board of Education, in accordance with the recommendations of the Report of the Committee on Universities and Training Colleges, 1928, has appointed a Central Advisory Committee for the Certification of Teachers, consisting of representatives of the bodies and

interests chiefly concerned in the training and recognition of teachers, to maintain a general survey over the Final Examinations conducted by Joint Boards for students in training colleges and to advise the Board upon questions arising thereon.

2.—The Committee will be constituted as follows :

Chairman : Mr. R. J. G. MAYOR, C.B.

Representing Universities and University Colleges, nominated by the Standing Committee of Vice-Chancellors and Principals :

Dr. H. J. W. Hetherington.
Dr. T. Loveday.
Professor C. R. Chapple.
Professor Sir T. Percy Nunn.
Dr. A. Robinson.
Professor J. Strong, C.B.E.
Professor H. A. S. Wortley.
Professor A. A. Cock*
Professor S. H. Watkins*

*In alternate years.

Representing Local Education Authorities—Nominated by :

Association of Education Committees : Mr. Percival Sharp.
County Councils Association : Sir Percy Jackson.
Association of Municipal Corporations : Dr. James Graham.
London County Council : Mr. G. H. Gater, C.M.G., D.S.O.

Representing the Governing Bodies of non-University Training Colleges—Nominated by :

Local Education Authorities providing Training Colleges : Not yet appointed.
Board of Supervision for Church of England Training Colleges : Mr. R. Holland.
Catholic Education Council : Rev. J. J. Doyle.
Other non-University Training Colleges : Rev. H. B. Workman.

Representing the Teaching Staffs of Training Colleges, nominated by the Joint Standing Committee of the

Training College Association and Council of Training College Principals:

Mr. F. L. Attenborough.
Miss A. Lloyd-Evans.
Mr. T. P. Holgate.
Miss S. E. S. Richards.

Representing the Teaching Profession as a whole, nominated by the Teachers Registration Council :

Mr. W. D. Bently.
Miss E. R. Conway, C.B.E.
Dr. Lucy A. Lowe.
Mr. T. Raymont.

Mr. A. McL. Currie will act as Secretary.

3.—The President reserves discretion to make any addition to the membership of the Committee which may at any time appear desirable. Under this provision an additional member will be appointed as soon as possible to represent the interests of the training colleges of domestic subjects.

4.—The period of appointment will normally be four years. Any necessary arrangements for the retirement by rotation of the original members will be discussed with the Committee.

5.—The Board of Education will be represented at the meetings of the Committee by such of their officers as the nature of the work may require. These officers will attend as assessors with the right to speak but not to vote.

6.—The Committee will assume its functions, as defined at the end of paragraph 1 above, on the date of its first meeting, which will probably be held in the coming autumn.

7.—Accommodation and secretarial and clerical assistance will be provided by the Board, and travelling expenses, etc., will be allowed to the members.

8.—All communications should be addressed to the Secretary, Board of Education, Whitehall, London, S. W.1, and the envelope should be marked "Central Advisory Committee for the Certification of Teachers."

AUBREY V. SYMONDS.

N.B.—Miss Cook (Manchester) has been added to the Committee by the President of the Board to represent Domestic Science College interests.

THE SPIRITUAL ASPECT OF EDUCATION.

Report of an address given by the Archbishop of York (Dr. Temple) at the General Meeting of the N.E. Branch of the Training College Association, held at St. John's College, York, on 21st June, 1930.

The Archbishop, referring to the title of his address, suggested that the word "aspect" might lead to misunderstanding. The spiritual element in education is "an influence that pervades and dominates the whole of education." Although we can isolate it for our attention, it is not one phase parallel with others. Plato's argument, in the first book of "The Republic," that there is no special area or sphere of justice or righteousness—that its sphere is in the conduct of life and in every relationship of life—is also applicable here. This deepest of all educational interests has to be dealt with in our schools in periods set apart on a time-table. There is a use for these periods and for specialists, but if this were all we should miss the pervading influence of this spiritual element. It should pervade all the rest, while finding its focus in religious observance or religious instruction.

Recalling his broadcast talk on "A point of view," the Archbishop said that all modern schools of psychology reject as false the assumption that human personality, given at birth, is one and indivisible. Yet this has not yet penetrated the public mind, or guided the practice in education. Modern philosophy and ethics were reconstructed from that basis—the assumption being that the individual conscience was the ultimate court of appeal, and that the elements of psychic life had a unity from the outset. Modern psychology, whilst admitting that there is at first a potentiality of a united person, has resolved the individual conscience into a chaos of instincts and impulses, which environment at any moment may set in motion. As only one organized group of these instincts can operate at

a time, the growing child, particularly the adolescent, is liable to be a multiple personality for all practical purposes.

The task of the educator is to fuse these elements together in such a way as to produce the right order of subordination to the individual soul, and for this we need some guiding principles. An examination of possible principles reveals that, although a purely individual or self-centred principle, e.g., a strong ambition to excel in some skill or art, or to dominate others, may produce a harmony of elements in the soul, there are elements in human nature, such as generosity, which resist this principle. Development on this basis cannot lead to satisfactory social or spiritual results. Even a social principle, e.g., duty to society or one's own country, may also involve antagonisms, and lead to conflict.

The only satisfactory principle about which to group all the instincts of the soul is that which represents the real good of all mankind—the universal social principle. Our great educational need is to find the concrete embodiment of this universal spirit. In religion we find it embodied in such a way that it appeals to imagination and sympathy, and makes the life of service the ideal. The focus is in the actual life of a person, as representing the kind of thing we want—the human expression of the divine.

The educator's business is the unifying of personality about a centre which represents those interests of man by which he is brought into unity with his fellows. Plato described the process as that of teaching the people to love and hate the right things, in such a way that when reason comes they are glad to accept them. We, on the other hand, have been imparting

the intellectual formulation of experience which the child has not had. "It may be right," said the Archbishop, "that children should learn by heart early the expression of that kind of reality which calls out sympathy, but we have been too anxious that they should make the right noises—that they should say the correct thing somehow—instead of directing our efforts towards developing the right state of mind." In insisting upon parrot repetition of correct formulas before they have any meaning for the child, we are creating the mind that is content without understanding, and are making it more difficult in later years.

After emphasizing the importance of keeping the proportion and perspective true in the presentation of reality, his Grace spoke of the increasing tyranny of examinations—due to professional and commercial pressure—and their baneful influence on education. There are not enough good examiners, ("who require rather high moral and intellectual qualities")—who are prepared to assess more highly the individual opinion, whether

right or wrong. The examinees express opinions which they do not believe, but which they know will bring marks, and insincerity is thereby encouraged. We have to seek to stamp this out by all means in our power.

The urgent need is for intellectual leisure—for calm, quiet, and peace—without which the spiritual element cannot develop. The crowded curriculum in training colleges leaves no room for it. There is only time for students to pursue their studies in the spirit of doing their best in the subjects. "The very conditions," said the Archbishop, "are making it impossible to do the things which in your hearts you consider the most important."

His Grace closed his address with a strong plea that the Training College Association should clamour "until the curriculum of training colleges is cleaned out," and until there is made possible some intellectual leisure, some sense of spaciousness, "so that the spiritual focus will maintain the whole."

J. M. CARDER,
Hon. Sec. N.E. Branch.

THE T.C.A. IN GENEVA.

Twenty-four members of the T.C.A. spent a pleasant fortnight together this summer at the Hotel d'Angleterre, Geneva. After a really friendly reception on Sunday afternoon in the grounds of a large house outside the city, we spent the first week in attending a course of lectures arranged by the Geneva Institute of International Relations. The programme included lectures by Professor Raffard, Dr. Zimmern, Professor Gilbert Murray, Professor de Madariaga, Mr. Arnold Foster, Mr. J. L. Garvin, and others, and visits to the I.L.O. and League of Nations Assembly Hall, where the organization and work of the League

were explained by Mr. Frederick Whelen. It was agreed that rarely had we heard a series of lectures so consistently good. Americans, particularly two or three Senators, seemed on the whole more ready to take a part in the discussion following than the English half of the audience. The most energetic members fitted in another series of lectures and demonstration classes at the Bureau of International Education.

The week-end was enlivened by the arrival of additional members of the party, including Dr. Curzon, fresh from marking papers, and Mr. Cons, who read us a very sound paper on

"International Aspects of School Geography." Saturday afternoon was pleasantly spent in an excursion on the lake, made somewhat more exciting by a thunderstorm.

The second week we attended the Geneva School of International Studies, an eight-week school for post-graduate students run by Professor Zimmern, who has just been appointed Professor of International Relations at Oxford. Here we met students from England, France, Germany, Switzerland, Italy, Norway, Sweden, Finland, Greece, Austria, Ireland, Canada, New Zealand, and India, and no doubt many other nationalities were represented. The most marked characteristic of the gathering was the spirit of international friendliness everywhere displayed and the interest taken in the political and social problems common to the different states and the various attempts to solve them.

Here we had the interesting experience of listening to Professor Dover Wilson explaining our English educational system for the benefit of about two hundred and fifty people who knew little about it, and that little only from the outside. Even more stimulating were the seminars held every evening. In our group the chief subjects under discussion were the working of party politics in the various countries and the value of a university education. These seminars proved a fascinating way of bringing one's knowledge of political science up to date, since each country had an exponent of its own ways.

The Association is deeply indebted to Dr. Curzon for his idea that we should study internationalism in Geneva and to Miss Anderson for the admirable arrangements that she made for us. Even if another T.C.A. party is not organized next year, it is evident that individual members of the T.C.A. would be most cordially welcomed at the Geneva Institute and at the Geneva School of International Studies.

D. M. GILL.

TO THE T.C.A. AT GENEVA.

A BRIEF CHRONICLE.

Through many years the T.C.A.
Has sought the highest plane,
And every January they
A further stage attain.

New methods with the English child
And what is really done
Have recently been reconciled
By Dr. Percy Nunn.

Ambitiously we tried to trace
On Aberystwyth's shore
The progress of the human race
In 1924.

And now a higher flight we take,
And join the consultations,
Beside the poets' oft-sung lake,
About the League of Nations.

From North-east and North-west we came,
From Brighton-by-the-Sea,
From cities of Old English fame,
And Welsh antiquity.

We have explored a wondrous mesh
Of constitutional lore,
And seen—distinctly in the flesh—
A Yankee Senator ;

And in the dim Assembly Hall
Have heard the great Peace Saga ;
And for a life-time will recall
Unique Madariaga.

Rivals in charm for pride of place
We note Piaget's course,
Brierley's style and Siegfried's grace,
And the great Rappard's force.

Or Whelan's smile and Zimmern's ease,
Untying hopeless tangles,
(How his and Murray's skill must please
In international wrangles) ;

And not least the felicity
Of one of our own Dons—
The talk on World Geography
We had from Mr. Cons.

Codification, precedent,
World solidarity,
Juridical experiment,
Predicability.

To work these notes into my rhyme
No doubt were very clever—
Involving endless space and time
One can't go on for ever !

But let me venture at the end
My mead of thanks to pay
To our accomplished guide and friend,
The expert K.B.A. W.H.

FORMATION OF A COMMITTEE OF SECTIONS.

In recent years several Subject Sections of the T.C.A. have carried out constructive work of great value and interest to the specialists responsible for the subjects in the colleges. Some of this work has been published in the *Bulletin* or elsewhere, and may be familiar to readers. Nevertheless, branches have experienced difficulty in maintaining adequate interest in the sectional side of their activities. And there has hitherto existed no machinery by which, when necessary, the work done by different sections could be co-ordinated. With a view to helping forward the sectional activities of the Association the Council, at the instigation of Mr. Welpton, appointed a Committee, consisting of all General Conveners, which met at Leeds in June. The Committee at that meeting considered ways and means of assisting conveners to carry on work of inquiry and discussion,

and of enabling sections to co-operate in the study of educational problems which affect the whole Training College curriculum. Mr. Hamilton suggested, as a common problem which concerned all sections, and which was at the present time of prime importance, the training of teachers for senior schools. It was agreed that, with Mr. Hamilton as organizer, the sections should devote at least part of their time during the next year to this problem, and that a report on the results of their work should be submitted to the Council with a view to possible publication.

Attempts are now being made to define more clearly the work, bearing upon this general problem of post-primary training, to be done by the sections. At the next meeting of the Committee, in January, it should be possible to start the work along quite definite lines.

E.R.H.

Note.—A number of reprints of "Suggestions on Mathematical Work in Training Colleges" is still available. Any member of the T.C.A. who would like a copy should write to Mr. E. R. Hamilton, 26, College Road, Bangor, N.Wales.

THE FUTURE OF "THE FORUM OF EDUCATION" AND OF THE "BULLETIN."

"The Forum of Education."

Members of the T.C.A. should read carefully the notice in the current number of *The Forum*. It will be seen that the T.C.A., with the B.P.S., has completed negotiations and has agreed to the joint publication of a new journal, to be entitled *The British Journal of Educational Psychology*, incorporating *The Forum of Education*, under conditions which will free the Association from the burden of supplying an expensive journal to every member.

It is expected that the new journal will not appeal to every member of the T.C.A., but that it will be even more valuable than was *The Forum* to many members.

The Council has agreed that for 1931, as an experiment, the new journal will be obtainable by members on payment of an extra subscription of 5s. In order that the T.C.A. may be able to inform the Editor of the number of copies which will be required by members of the Association, the Secretary will be glad if members will complete the enclosed form and forward it to her immediately.

"The Bulletin."

The T.C.A. will continue to publish a journal devoted to matters of special interest to its members. This journal will take the form of a larger BULLETIN.

It will be sent post free to all members of the T.C.A.

It is hoped to publish in this journal reviews of books (other than those on educational psychology) of interest to members, and articles on topics outside the scope of the *British Journal of Educational Psychology*, in addition to records of the activities of the Association, and that members of staffs will co-operate in making it a living organ of the T.C.A.

Lieut.-Col. W. J. Douglas, who has acted as an Editor of THE BULLETIN since its inauguration, has asked to be relieved of this duty at the end of the year. In his place Dr. H. E. J. Curzon, Goldsmiths' College, New Cross, has been unanimously elected. All future communications should be sent to him.

TRAINING COLLEGE ASSOCIATION.

I $\frac{\text{wish}}{\text{do not wish}}$ to subscribe for the *British Journal of Educational Psychology*, incorporating *The Forum of Education*, and agree to pay a subscription of $\frac{\text{£1 } 2\text{s. } 6\text{d.}}{17\text{s. } 6\text{d.}}$ for 1931.

Signed

College

Address to which the Journal should be forwarded.....

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